UNIFRUITCO

Published Monthly
by
UNITED
FRUIT
COMPANY

FOR EMPLOYEES IN ALL
BRANCHES OF ITS SERVICE

M. E. SCHOEN
EDITOR

April
1928

Volume III
No. 9

UNITED FRUIT COMPANY
BOSTON, MASSACHUSETTS

A corner in one of the parks, Banes, Cuba

Pine ridge near Olanchito, Honduras

The Plant Life of Central America

By Paul C. Standley

Associate Curator National Herbarium, U. S. National Museum, under Smithsonian Institution

(Being a paper read before the Ulua Society at Tela, Honduras, January 30, 1928)

EDITOR'S NOTE: *The photographs featured with this paper were loaned us by Dr. Samuel J. Record, Professor of Forest Products, Yale University. When forwarding them Professor Record wrote: "I am confident that the publication of Dr. Standley's article will serve to stimulate new interest in the work of collecting and add materially to the knowledge of the plants of that region. I have had excellent cooperation from the Fruit Company and I hope that other employees will be encouraged to collect woods and botanical specimens necessary for identifications."*

IN 1531, eighty-nine years before the Pilgrims landed at Plymouth, there was published in Madrid an imposing quarto volume of many pages, which contained the first account of the natural history of the New World. This classic work came from the pen of the versatile historiographer of the Indies, Gonzalo de Oviedo, who had spent many years in residence in the Spanish possessions beyond the seas. Appointed for a time Governor of Santo Domingo, he was dispatched later to Castilla de Oro, as Panama was then known, to secure for the king the royal tithes from the gold mines; and later he spent several years in travel in other remote parts of Middle America, particularly along the Pacific slope of Costa Rica and Nicaragua.

Oviedo's facile pen has given us a lively picture of the regions that he visited, with detailed descriptions of their human inhabitants, animals, and plants. As a source of accurate information, he is equalled by few of the writers who have succeeded him. His long chapters treating the plants of the Antilles and Central America contain the first published information regarding the flora of these regions. He describes many of the common trees, mentioning them, in many cases, by the same vernacular names which are applied to them today. It is almost unbelievable that one of the trees to which he devotes a chapter, the *tempisque*, a tree native from Panama to Salvador, and so well known as a fruit tree that the most important river of the Costa Rica province of Guanacaste is named for it, should have remained for 300 years unknown to science, until 1912, when it was given a technical name by Henry Pittier.

Little additional information concerning the plants of Central America was obtained until the thirties of the nineteenth century. Spain, ever jealous of her American posses-

sions, barred them to foreigners, during colonial days, and there was little opportunity for obtaining information concerning the products of tropical America. Several scientific expeditions were sent to America by the Spanish government, but for the most part the manuscripts which reported their results remain still unpublished among the royal archives in Madrid.

The earliest recorded collection of Central American plant specimens is owned by the British Museum of Natural History. It consists of a few specimens gathered in 1700 on the Atlantic coast of Panama at the ill-fated Scotch settlement of New Caledonia. The specimens were gathered by a ship's surgeon, who published in the Transactions of the Royal Society in 1701 a brief and quaintly worded account of his visit to Panama.

Another collection of plants was made in Panama, chiefly about Ancon Hill, about 1790, by Nee and other scientists attached to the expedition of the Navigator Malaspina. Detailed exploration of the plant life of Central America began about 1838, when a Danish botanist, Oersted, arrived in Costa Rica, to remain there for three years. The botanist of today can not but envy Oersted his opportunity of being the first to study the unrivaled flora of that republic, which for beauty and variety has no parallel in North America, and certainly is not excelled in any portion of South America.

Botanical investigation in Central America during the nineteenth century was conducted chiefly by men sent out from European establishments in search of orchids and other ornamental plants for introduction into European greenhouses, and by two British exploring expeditions which worked along the Pacific coast. Toward the end of the century, Central America began to be visited by North American botanists. Most eminent of these was Captain John Donnell Smith, of Baltimore, who graduated from Yale University in 1847, and is now living at the age of nearly ninety-nine years.

Captain Smith presented the large herbarium of plant specimens which he had formed through his own field work, or through subsidy of other collectors, to the Smithsonian Institution some years ago. His herbarium is the basis of the Central American collections now in the National Museum. These have been greatly increased in recent years as the result of collecting expeditions dispatched from Washington, and they are beginning to give us a definite idea of the extent and nature of the Central American vegetation. The Central American collections now in Washington consist of probably 200,000 specimens.

Owing to the rough surface of the country and the lack of adequate transportation facilities, exploration in Central America must progress slowly, and many years will pass before the plants are thoroughly known. One who has seen Costa Rica will realize the impossibility of covering even that small state adequately. In a region so completely occupied as New England, new species of plants still are found occasionally. How many hundreds of years, then, must pass before we have listed every plant inhabiting each isolated valley of Central America?

OF the six Central American countries, the one best known botanically is Costa Rica. To any one familiar with that country, the reason for the collector's preference for Costa Rica needs no explanation. Possessed of a flora of inexhaustible interest and beauty, with a climate which approaches if it does not atttain perfection, with a people who in hospitality, charm, culture, and simplicity are not surpassed anywhere, and with comfortable living and traveling conditions such as are to be found nowhere else between the Rio Grande and southern Brazil, it is not strange that Costa Rica has received more than its fair share of the attention of foreign scientists. In spite of the great number of botanists who have visited the Republic, it is impossible to exhaust its flora. Already there are probably 7,000 species of higher plants recorded for Costa Rica, and I have little doubt that at least 3,000 more will be added by further exploration. The flora includes about 1,000 species of orchids, and an equal number of ferns. Costa Rica has approximately the area of the State of West Virginia, which possesses only about 2,000 species of higher plants.

A great deal of botanical exploration has been conducted also in Panama, but that country thus far scarcely has been touched, except for the narrow belt bordering the Canal, which has been more thoroughly explored than any other area in Central America. The collections which have been brought from Guatemala are rather extensive, and indicate that its flora in size will rank next after that of Costa Rica. Salvador has been covered in a preliminary way, and there has been published a list of some 2,000 species of plants which have been found there. The Salvadorean flora is undoubtedly the smallest possessed by any of

the Central American republics, principally because of the fact that the country lies wholly on the Pacific slope, whose vegetation lacks the variety exhibited on most parts of the Atlantic watershed.

Of the flora of Nicaragua and Honduras almost nothing is known. Nicaragua was visited by a few botanists during the nineteenth century, and by one or two in more recent times. Probably the number of plant species known at present will not exceed 1,000, although the actual number must be four or five times as great. In Honduras practically no plant collections ever have been made, and I doubt that a list of 500 species could be prepared for the country with the material heretofore available. Because of its varied topography, and especially on account of the great number of isolated mountain ranges, it is certain that the Honduran flora is a rich one, and probably will reach 5,000 species when it has been explored even casually.

FOR one who wishes to gain some information regarding the plant life of Central America, there is, unfortunately, practically no information in published form. For the West Indies there is a profusion of reliable books, describing in detail, and sometimes in popular terms, the vegetation. For Mexico there has been printed an account of the woody plants, which number 5,700 distinct kinds; but for Central America the literature is meager indeed. There is now in press an illustrated semi-popular account of the plants of the Canal Zone, which will be of some practical use also in other parts of the Central American lowlands. There has been published an enumeration of all the plants known from the Republic of Salvador, but this is a mere list of the Latin names, with their local vernacular names. A partial list of the Costa Rican plants was published many years ago, but has long been unobtainable. For the rest of Central America there is absolutely nothing of any aid whatever to one who wishes to become acquainted with the general or detailed features of the vegetation.

For a number of years we have had in preparation in the National Museum in Washington a full account of the vegetation of Central America, but such an undertaking requires so much time for its completion that it is still uncertain when its publication will begin. About a third of the report already has been written. It will include descriptions of all the plants known from the region between Mexico and Colombia, with information regarding their distribution, uses, and native names.

I should not omit mention here of the fine work entitled "Plantas Usuales de Costa Rica", printed some years ago by Henry Pittier. This lists and describes in a popular

Native home among bananas—Eastern Guatemala, Los Andes District

way most of the economic plants of Costa Rica, and is a work invaluable for reference. Would that we might have a similar publication for each of the tropical American countries.

A classic work which describes in a popular way the more salient features of Central American natural history is Thomas Belt's "A Naturalist in Nicaragua". Because of its easy style, this book will delight any one who has the least interest in the animal and plant life of this general region. Mr. and Mrs. Calvert, also, in "A Year of Costa Rican Natural History", have given us an interesting volume, useful throughout the American tropics.

Mahogany tree, Guaymas, Honduras

THE flora of Central America, in general, is one of the most varied and most interesting to be found in all the tropics of the world. It comprises certainly not less than 15,000 species of plants, and probably the true number is greatly in excess of this estimate. It includes a host of important economic plants, some of which still await introduction to North America and Europe, and thousands of plants which are notable for their brilliant flowers. About a hundred years ago many of the most attractive Central American plants were introduced into cultivation in Europe, and many of them are among the most prized hothouse plants. Some of them are grown commonly for ornament in the gardens of the Old World tropics. A few, even, have become serious weed pests in the Old World, notably the lantana in Hawaii, and the dahlia in India.

The remarkable diversity of the Central American vegetation is the result, on the At-

At right: Getting out a wood specimen in clearing—Hopi Farm, Guatemala

Below: Getting wood samples for Yale School of Forestry on Hopi Farm, Guatemala. Henry Kuylen is standing at the right

lantic slope, of a heavy rainfall, and, in general, of the broken surface of the country, with its innumerable mountain ranges and isolated volcanoes. Although the climate is not quite so varied as in Mexico, it nevertheless exhibits most of the extremes of variation. In spite of the fact that the area of Mexico is much greater than that of Central America, the latter, because of its combination of climatic and topographic conditions, has a much richer vegetation. On some of the high peaks of Costa Rica and Guatemala ice forms nearly every night. The Cerro de la Muerte of Costa Rica received its name because the penetrating cold felt there has caused the deaths of travelers and of innumerable animals. In the Zacapa Desert of Guatemala there are combined extreme heat and aridity. Nearly every intermediate climatic combination may be found somewhere in Central America.

The vegetation of Central America is closely related to that of the adjacent or adjoining regions. The relationship with that of the West Indies is not very close, although many of the abundant weedy species of the two areas are identical. Along the Atlantic coast there is a certain uniformity in the plants from Guatemala south to Panama, and southward to the Guianas and northern Brazil. In every local region, nevertheless, you find local species which occur nowhere else along the coast, and as one goes northward the southern species of trees and herbaceous plants gradually disappear.

THE distribution of some of the trees is extremely erratic. For instance, there was found recently in British Honduras a tree known otherwise only from Brazil and western Africa. It may well be that with more thorough exploration the ranges of the trees will be found more regular than now seems to be the case.

The flora of the Pacific slope, also, is fairly uniform from Panama northward into middle Mexico. The vegetation of Pacific Colombia, however, is quite different, because the climate there is wet rather than dry. But the flora of Venezuela and of the Atlantic coast of Colombia, a dry region, is conspicuously like that found along the Pacific coast of Central America. It is not easy to explain the fact that the vegetation of western Mexico is more like that of Cuba than is the vegetation of eastern Mexico. Why, also, is there a close relationship between the plants of the mountains of Salvador and those of the limestone plains of Yucatan?

The greatest difference in the distribution of Central American plants is seen when we compare the flora of the Atlantic coast with that of the Pacific slope. The climates of these two slopes are very different. On the Atlantic watershed there is a long-extended wet season, one which, in some regions, continues throughout the year, as a matter of fact. The heavy rainfall induces a luxuriant plant growth. The Atlantic forests are noted for their density and for the great size attained by many of their trees. They are extremely diversified as to the kinds of trees of which they are composed. It is but rarely that we find in the tropics a forest of the type so common in the temperate zone—composed of but one or two kinds of trees.

Everywhere on the Pacific slope of Central America there are two sharply marked seasons, wet and dry, of nearly equal length. During the six months of the dry season there is usually no rain whatever. These seasons, in their effect upon vegetation, are strikingly similar to the summer and winter of the United States. During the dry season many trees shed their leaves, and the forests, much less dense than the Atlantic rain forests, become almost as dismal as northern forests in winter.

It is a curious fact that in Central America the Spanish words *verano* and *invierno,* applying in Spain to the northern summer and winter, respectively, are used in Central America to designate the months occupied by the winter and summer of the north. Oviedo, writing in 1531, states that the present usage was established by the earliest Spanish colonizers of Central America. The hot, dry winter months were called *verano* because they resembled in their heat the summer of Spain; and the rainy season of the summer months was called *invierno,* because during this time the temperature was lower, and the rains compelled the people to remain indoors, as they must in Spain in the winter months.

THE vegetation of all Central America may be divided roughly into three principal belts, according to temperature, which here is dependent largely upon elevation above sea level. The upper limit of each of these belts depends to a great extent upon local conditions. For example, in a certain part of the province of Guanacaste, Costa Rica, because of exceptional distribution of rainfall, we find at 1,500 feet a climate and vegetation such as exist in central Costa Rica only at an altitude of 5,000 to 6,000 feet.

The greater part of Central America lies within the *tierra caliente,* at an altitude of 3,000 feet or less.

The *tierra caliente* is dry for at least half the year, on the Pacific slope, and excessively wet along the Atlantic coast. It is characterized by high temperatures, in most of its parts, and on the Atlantic watershed by luxuriance of vegetation. It is the region least suited for human habitation, especially because of the prevalence of malaria, and would probably remain nearly uninhabited were it not for artificially created economic conditions. The *tierra caliente* is preeminently the zone of the banana, sugar-cane, rice and cacao, although maize grows well, and especially on the Pacific slope, a great variety of other agricultural products is obtained.

The *tierra templada* or temperate belt is the most delightful part of Central America, and the one on which the natural prosperity of the region depends. It consists of the elevated valleys and table-lands, and of the lower slopes of the high mountains. The elevation of the *tierra templada* ranges from about 3,000 feet to six or seven thousand, depending upon local conditions. Throughout most of Central America, it is the region in which the bulk of the population is concentrated. The chief crop is coffee, but nearly all the plants of the whole world may be grown successfully. When the soil is sufficiently fertile, conditions are nearly ideal for human occupation. Certainly it would be difficult to imagine more congenial climate conditions than exist almost anywhere in Costa Rica, Salvador, and Guatemala, at middle elevations.

Large ceiba tree of Guatemala, with its hanging garden of orchids and lianas

The vegetation of the *tierra templada* is probably the most varied, and certainly the most interesting, to be found in Central America. In the north the forests in many places are predominately of pines and oaks. The pines extend southward only into Nicaragua. In Costa Rica the temperate forests in many localities consist almost exclusively of oaks.

The *tierra fría,* or cold zone, is of limited extent in Central America. It consists of most of the mountain slopes above 8,000 feet, but the only countries which possess any considerable areas of such land are Costa Rica and Guatemala. In Guatemala a large population lives in the *tierra fría,* depending for its livelihood upon such crops as are produced commonly in the temperate zone. In Costa Rica a substantial dairy industry has been developed on the higher slopes of the volcanoes, where wide areas of forest have been cleared and converted into pastures. These pastures, incidentally, are one of the most charming features of Central America, and in them the visitor from the north will feel quite at home. He will see an abundance of flowers which have been imported from the north with grass seed, and have become throughly established, such as dandelions, red and white clover, the English daisy, foxglove, oxeye daisies, buttercups, and dozens of others.

The vegetation of the *tierra fría,* at least as represented in Costa Rica, is of exceeding interest. Nowhere else can there be found such an abundance of parasitic, or rather epiphytic, vegetation. The excessive moisture, produced by almost perpetual mists and fogs, is particularly favorable to the growth of epiphytes. Every tree is loaded with orchids, ferns, mosses, and other similar plants. Nowhere else in Central America can there be found such an abundance of color as may be seen anywhere in the upland pastures of Costa Rica. The display of red, yellow, white, and blue, equals anything to be found in the alpine gardens of the Rocky Mountains.

This abundance of color is all the more striking because of the general absence for most of the year of any conspicuous colors in the tropical forests. Those who depend upon books for their ideas of the tropics imagine that the vegetation of tropical America consists chiefly of palm trees and a blanket of gaudily colored orchids. In the typical forest of the Central American lowlands one may

wander all day without seeing a single brilliantly colored flower. Any bright-colored flowers that do exist there are likely to be situated upon the tops of the highest forest trees, where they are invisible, unless viewed from a distance.

ALTHOUGH, to those who are interested, botanical work for science's sake alone is a fascinating study, the continued expenditure of money for botanical exploration could not be justified unless some definite results of economic value followed the exploration. It is easy to establish such a justification for the continuance of botanical exploration in Central America. If nothing more had resulted from previous explorations than the introduction of the many handsome orchids and other plants which now adorn the gardens of Europe and North America, the exploration would have been profitable. But the results have been of much greater practical importance. Central America, including in its broader sense Mexico also, has given to other parts of the world some of its most important economic plants. It is true that not many of these were introduced through the efforts of professional botanists, because, in the case of the most valuable plants, their merits were so apparent that the novice could appreciate them.

At the present time, probably the most important work remaining for the botanist is the reduction to a tangible system of the chaos now existing with regard to the timber trees. One of the important products of Central America is lumber. This industry is now of less extent than the available resources would lead one to expect, but the lumber industry in Central America is certain to develop rapidly as more attention is directed toward it.

Trees are the most difficult plants to study. They are so large that they must be cut in order to obtain specimens, and cutting is expensive and time-consuming. The only alternative is a search for bits of flowers, fruits, and leaves fallen on the ground, but this method savors too much of those followed by paleontologists.

Most trees are found in flower for only a brief season, and the collector must be on the spot at exactly the right time. What is most sorely needed in Central America is a resident botanist who might devote his whole time to a study of the local timber trees. For years certain kinds of wood have been exported from parts of Central America without any knowledge of their botanical relationships. If the trees producing these woods were known scientifically, it would be feasible to learn whether they existed also in some other part of tropical America, and if they did, it would be possible to establish another center of export. It is for such a reason as this that it is important for a botanist to visit numerous localities in Central America, obtaining as many specimens as possible of the trees, for example. These specimens are kept on file by the institution in which they are deposited, and they may be consulted by anyone who wishes to obtain information concerning the regions where there is found a particular plant in which he is interested. The tropical American collections in the National Herbarium in Washington are consulted every year by hundreds of persons, some of them from commercial organizations, in search of data of this sort.

Henry Kuylen, the cow-tree milkman of Guatemala, makes his morning rounds

PROFESSOR SAMUEL J. RECORD, of Yale University, during the past few years has been engaged in a study of tropical American timber trees, from both the technical scientific standpoint and from the practical side. By combining in an orderly manner the two lines of investigation, he has produced results of the greatest practical value. I may mention specifically his work with the Central American rosewood and cocobola wood, the latter of which is much used in the United States for the manufacture of knife handles and many other objects. Only very recently

At left: The logwood tree of British Honduras. The colony was founded on the logwood trade. At right: Native boy gets a refreshing drink of water from a Bejuco de Agua, Guatemala

we have been able to obtain study specimens of the rosewood of British Honduras, which has long been exported in substantial quantities to the States. When leaves and flowers were collected, it was found that the tree was one heretofore unknown to science. Another recent discovery, of little practical value, perhaps, but useful for advertising purposes, nevertheless, is the famous cow tree of Guatemala, which has received so much attention in the UNIFRUITCO Magazine as well as in many newspapers in the States. This tree I have hoped to find in Tela, but so far without success, although I have no doubt that it does occur somewhere along the Honduran coast.

THOSE who are familiar with "Tropical Woods", a magazine devoted to tropical trees and published by Yale University will know what a large part the UNITED FRUIT COMPANY has played recently in the exploration of Central American forests. Several employees of the Company, especially in Panama and Guatemala, have sent to the States for study really remarkable collections of local timber trees. Just before leaving Washington, I made a preliminary study of a collection of about 150 tree specimens sent by Fruit Company men from Chiriqui, Panama. The collection contains probably 20 trees which were unknown previously and will be named and described as soon as there is time for their careful study.

Several special groups of plants are unusually well represented in Central America. Of greatest scientific interest, perhaps, are the orchids. It is doubtful whether these curious plants are better developed anywhere else in the world than in Central America, although the East Indian Islands commonly are supposed to be full of orchids. Orchids reach their best development in the tropics, although they

Orchidaceae
—drawing from fresh material made December 21, 1927, roughly twice its natural size
—Sketch by F. C. Englesing

are not confined, by any means, to hot climates. In the United States about 150 species are represented, some of them quite as beautiful as any of the tropical forms.

In the north all the native orchids grow in the ground; in the tropics most, but not all, grow upon the branches of trees, obtaining their nutriment from the vegetable and mineral matter lodged about their roots. They are not connected organically with the trees upon which they grow. Not all plants growing upon the branches of trees are orchids; on the coast of Honduras most of the plants seen in such locations belong to other groups of unrelated plants.

In number of orchid species Costa Rica far excels any other part of Central and North America, and possesses certainly as many as a thousand distinct forms. The orchids achieve their best development as to number of kinds and individuals not in the hot lowlands but at middle and high elevations. In the high mountains of central Costa Rica it is an easy matter to find in a single day over a hundred species of orchids in flower. Some of these, such as the Cattleyas, Miltonias, and Odontoglossums, are as fine as any flowers produced in the hothouses of the north.

Panama, especially the mountains of Chiriqui, and Guatemala (particularly Alta Verapaz), also have a large number of orchids. There died in the Canal Zone a few months ago a man who had done more than any other to make known the orchid flora of Panama. Mr. C. W. Powell, at the age of sixty, without any previous botanical training, began the collection of Panama orchids as a hobby. When he died, he had more than doubled the number of orchid species known from the Republic, and had discovered over 100 new species. He had assembled at his own expense, and he was a poor man, over 7,000 orchid plants, representing nearly all the species known from Panama. The Powell Orchid Collection has long been one of the sights of the Canal Zone, and it is a satisfaction to know that it is to be maintained permanently by the Missouri Botanical Garden, of St. Louis, the institution which acquired it shortly before Mr. Powell's death.

The other Central American republics—Nicaragua, Honduras, and Salvador—have a comparatively meager orchid flora, because of the absence of suitable conditions for their best growth. It is probable that Honduras will be found to possess at least 300 species, but scarcely a third of that number are now known from the country.

Some of the Central American orchids were introduced into Europe early in the nineteenth century, and have long been among the most esteemed possessions of European orchid fanciers. The Cattleyas, which are the orchids seen commonly in the States in flower shops, are the most showy of Central American orchids. About four species of them exist in Central America. The most widely distributed, *Cattleya skinneri*, grows all along the Pacific slope. In Costa Rica and Salvador it is so abundant, that large bunches of the flowers may be bought in spring for twenty-five cents. The country people in central Costa Rica bring in the plants from the woods and throw them upon the tile roofs of their houses. In March some of the country villages are brilliant with the huge masses of color afforded by this beautiful plant, the *guaria morada*. The most valuable, from a commercial standpoint, of all the Central American orchids is the *guaria blanca*, a form of the common purple-flowered plant. The white Cattleya is esteemed very highly even in Costa Rica, and the plants are sold at prices ranging from ten to two hundred dollars.

No region of the world exceeds Central America in respect to ferns. Costa Rica alone must possess a thousand distinct kinds, and Guatemala probably two-thirds as many. Some of the many kinds of tree ferns are conspicuous features of the mountain vegetation, and numerous sorts occur also in the lowlands. The young tender leaves of one of the Costa Rican ferns supply an excellent vegetable.

The cone-bearing trees are most characteristic of the North Temperate Zone, and they are but sparsely represented in the tropics. Central America possesses four species of pines, which form extensive forests in Guatemala, Honduras, and Nicaragua. In Guatemala and Honduras there occurs in the highest mountains the single balsam-fir which exists south of northern Mexico. A form of the bald cypress, scarcely distinguishable from that occurring so abundantly throughout the swamps of the Southern States, grows in the mountains of Guatemala, where there exists also the Mexican cypress, which is planted so profusely as a shade tree throughout the interior of Central America.

CACTUSES reach their best development in Mexico, where some 600 kinds grow, some of them in great profusion. Most of Central America is too humid for the

Palms along the northern coast of Honduras

growth of these drought-loving plants, but even in the wettest parts there are always found a few cactuses, chiefly epiphytic forms with showy flowers, growing on the branches of trees along with orchids and ferns. In Salvador and Nicaragua there are hundreds of miles of hedges composed of a tree-like leafy cactus called *matial*, one of the most diabolical plants imaginable. It certainly forms an effective hedge, but it involves a great waste of land in Salvador, where land is valuable and scarce, and causes untold damage each year to horses and other stock, to say nothing of the torture inflicted upon human beings who have to travel the roads along which it is planted.

In the Zacapa Desert of Guatemala, there is a spectacular growth of cactuses, especially of the tree forms, which rivals the famous cactus deserts of Sonora and Chihuahua. The Zacapa Desert is the only part of Central America in which true desert conditions are maintained throughout the year, and it is of great interest as affording a wide variety of plant types known otherwise only from the deserts of Mexico.

A PECULIARLY tropical group of plants consists of the palms. Palms extend in America as far northward as southern California and South Carolina. They are most abundant in Brazil, but there is an ample representation of them in Central America, especially in Costa Rica and Panama. The most majestic of them doubtless is the corozo (known also as cohune and manaca), which, in two forms, is dispersed from Mexico southward into Colombia. The seeds of the corozo are rich in oil, and it is hard to understand why more persistent efforts have not been made to utilize the nuts, where the corozo occurs in greatest abundance, along the Atlantic coast.

Most decorative of all the palms is the familiar coconut, whose absence would remove the most picturesque element of tropical American vegetation. It is still, and probably always will be, uncertain whether the coconut is native of America, or whether it was introduced after the arrival of the Spaniards. It seems most probable that it is not indigenous to America, but that it was imported from the Pacific Islands prior to the coming of the Europeans.

The Pejivalle palm of Nicaragua, Costa Rica, and Panama, furnishes the best edible fruit produced by any Central American palm. The fruits, when cooked, are probably superior to chestnuts, which they somewhat resemble in their edible qualities. There is a thriving avenue of these palms growing at Lancetilla (Tela). Others of the local palms are valued for their leaves, which are useful for thatch and for manufacture of hats and mats. Several kinds yield edible fruits, and the cabbages of the better kinds are a delicious vegetable. Palm wine is produced by several forms. The ivory palms of Panama bear large seeds which are exported to the States for manufacture into buttons and other articles.

Some of the smaller palms of Central America are grown in the north as ornamental plants. Several of them are diminutive in size, some of the Chamaedoreas and Malorticas flowering when only one or two feet in height. One of the Guatemalan Chamaedoreas is the smallest palm of which there is

any record, the plants having flowered in London when only 10 inches high.

The Panama hat palm, which is really not a palm at all, occurs profusely along the coast of Honduras and throughout the wet lowlands of Central America. Despite the wide distribution of the hat palm, the celebrated "Panama" hats all are made in a single small town in the interior of Ecuador, where the palm itself does not grow, but where atmospheric conditions are exactly right for the weaving of the hats.

In plants of practical economic value, Central America, like most other parts of tropical America, is strikingly favored. It is noteworthy that temperate North America gave to the world no new vegetables and but few plants valuable for food. The only ones of importance are certain varieties of fruits, such as plums and grapes, which are probably not superior to the varieties already known in the Old World. With tropical America the case is different. Remove from the Old World and from temperate North America today maize, beans, tobacco, squashes, pumpkins, Irish potatoes, sweet potatoes, tomatoes, peppers, peanuts, and cacao, and how poor the world would be! All these plants are natives of the American tropics or subtropics. It is true that most of them were grown in the United States by the aborigines, but they had been brought from the south. The Old World on the other hand, contributed to Central America some of its most valuable plants, such as the banana, plantain, rice, sugarcane, the mango, and all the citrus fruits.

The Irish potato is native in the Andes of South America. In Central America it is grown abundantly only in Costa Rica and Guatemala, to which it was carried from Peru in the sixteenth century. The pineapple is probably indigenous to the West Indies. It is a curious fact that most of the important cultivated plants known to be native in tropical America are unknown in the wild state, and there must ever be much speculation as to their place of origin. It has been fairly well established that maize originated in central Mexico, but no very similar wild plant now exists there. Some of the common garden flowers such as marigolds, zinnias, and four-o'clocks, are seen in every tropical American garden, but their wild ancestors are unknown. It has been surmised that they have originated from former native forms which have been wholly destroyed as the result of many centuries of cultivation, although this explanation is not altogether convincing.

In fruit plants Central America is exceptionally rich. The avocado alone is sufficient to establish its fame, but there are also the papaya, nispero, zapotes, matasanos, and a host of others. One of the native blackberries, the *mora blanca* or *mora de caballo*, is far superior to anything known in the north. There are literally hundreds of little-known fruits, most of them decidedly inferior, but with an occasional one of outstanding merit. The native vegetables already have been mentioned. Yuca, which furnishes the daily bread to most of the people of the northern half of South America, is not indigenous to Central America, but was established here long before the arrival of the Spaniards, probably by the Caribs. Yams, pigeonpeas, and several other food plants were brought from Africa by negro slaves.

As in the case of fruits, there exist in Central America several unusual vegetables which are unknown outside very limited regions. Such are the cubaces, a large bean of central Costa Rica, and the tacaco, a relative of the chayote, found in the same region. In Salvador, where the population is so dense and the people so poor, every native plant is utilized if it is possibly edible. There is a remarkably long list of plants used as quelites, like spinach, some of them perhaps worthy of cultivation.

The fiber plant of greatest potential value in Central America is the silkgrass or *pita floja*, which occurs plentifully all along the Atlantic slope. Mr. L. H. Dewey, of the U. S. Department of Agriculture, states that this is the best fiber known, as regards strength and fineness of fiber. In the drier regions some of the Agaves and Furcraeas are grown upon a moderate scale for the manufacture of the rope and twine used locally. Conditions here are not so favorable for their growth and utilization as in Mexico.

Important fibers are supplied also by several trees of the cotton-tree family. The ceiba, which grows so abundantly about Tela, and is one of the two or three giant trees of the American forests, is so highly valued for the cotton or silk contained in its seed-pods that it has been introduced into the East Indies, and is planted there extensively for its silk or kapok. Probably a dozen other trees of the same group growing in Central America produce fiber of similar quality.

Central American rubber is well known, and it is exported in small quantities from certain regions. Its cultivation has been at-

tempted in Mexico and elsewhere, but apparently, under present conditions, it can not compete with Para rubber, native in Brazil, but now produced chiefly in the East Indies. About six distinct forms of the Castilla rubber trees are native in Central America. One of them growing in Costa Rica and Panama, although closely similar to the other species in general appearance, produces no rubber at all.

Many other Central American trees yield rubber in small or large amounts, but thus far little attention has been devoted to their investigation. The huge wild fig trees that are so abundant throughout this region at nearly all altitudes yield a kind of rubber which was utilized by the ancient Mexicans, and is still used for certain purposes in Central America. From the same trees the Mexicans made the paper upon which their manuscripts were written. From the bark of certain trees of the same family some of the Indians of Costa Rica and Panama still prepare most of their clothing, blankets, and boat sails.

Of dye and tanning plants the region yields a large number. Before the introduction of coffee, in the middle of the nineteenth century, indigo was the chief export from Central America. Everywhere along the west coast may still be found the remains of the brick tanks in which the dye was extracted. Indigo is still produced for export in the Department of Chalatenango, Salvador, near the Honduran frontier, perhaps the only locality in Central America at which it is now planted.

The medicinal plants are innumerable. A large proportion of the people of the interior are too poor to patronize physicians, and they depend for their remedies upon the plants of the field. The best that can be said of most of these herb remedies is that they are probably quite harmless. There are, however, some native plants whose therapeutic properties are well known. Sarsaparilla grows abundantly along the Atlantic coast, and everywhere about Tela. It is exported from Central America, but, strangely enough, as is so often the case with tropical plants of economic value, practically nothing is known concerning the plants which produce it. Sarsaparilla consists of the roots of species of Smilax, a group of plants well represented in the United States. There are a dozen species of Smilax in Central America, but the only thing known with certainty about them is that not all of them yield sarsaparilla. Ipecac grows wild in the *tierra caliente* of Nicaragua, Costa Rica, and Panama, and is gathered for market in Panama.

Of miscellaneous plants there are a great many of interest, but there is not space for their mention here. The water vines—lianas from sections of whose stems there may be obtained a good quality of waterlike sap—are well known throughout Central America. There is a large number of fish poisons or barbascos, which deserve more attention than has been given to them. In almost every part of the world there are plants used for poisoning fish; that is, the crushed plant is thrown into a pool or stream, and soon afterward the fish, intoxicated by substances contained in the plant, float upon the surface and are easily gathered. There must be thirty or more Central American plants of various families which are utilized in this way. Several plants of the region are known to yield deadly poisons, and some have been used for criminal poisoning. A close relative of the nux-vomica or strychnine plant is common in the forests about Tela, and in Panama is found another plant of the same genus, which was and still is used by the Indians of Panama and South America for poisoning arrows. The vine yields curare, one of the most deadly poisons known to man.

AS I have already remarked, it is the forest trees of Central America which best deserve further study. Their study must proceed rapidly, for deforestation already must have destroyed many species of Central American plants. It is alarming to note the rate at which the Central American forests, once apparently inexhaustable, are disappearing, and to observe some of the effects which have followed the removal of the trees in the highlands. Not only is the destruction in process along the Atlantic coast, but it is nearly or quite as rapid at some places in the interior, above all in Costa Rica. In Salvador most of the forest was cut many years ago.

While it is desirable that the amount of cultivated land be increased, the too rapid destruction of the forest cover involves irreparable damages. Native agricultural operations in tropical America are wasteful in the extreme, or at least they appear so. It is believed that the same agricultural system generally followed here, by its exhaustion of the land, caused the downfall of the former great Maya empire.

Land cleared and planted with bananas may

(*Turn to page* 545)

Across Honduras by Air in 1924

By Edmund S. Whitman

New York

EDITOR'S NOTE: In the March issue of UNIFRUITCO we printed the first of a series of letters which Mr. Whitman, while in Tela, Honduras, wrote to friends in the north and which he has turned over to us for publication. The second letter, featured herewith, was written four years ago and describes vividly Mr. Whitman's impressions of a transcontinental air trip from the Atlantic to Tegucigalpa, the capital of Honduras.

(*What with the publicity given to aeronautics by Colonel Lindbergh, The Queen of Diamonds, Baron von Richthofen and others, this seems to be the opportune moment to record this little incident, thrilling enough at that time, but about as exciting as a trip to the Zoo in these days and times.*

The year 1924 *was a pioneer date in Central American aeronautics . . . . I remember the hydroplane that came over from Puerto Cortes that year. I believe the aviator planned to take Dr. Nutter up in it. But the old crate came gently to earth some miles from the ocean back of Tela and had to be broken down and removed in fragments.*

As I recall, the machine I climbed into so suspiciously was a two-passenger, dual-control Lincoln-Standard Model 5. *The aviator had only made one flight in it for Tegucigalpa, and that was not ever completely realized since he had to side-slip into a rocky ravine a hundred miles from his objective. At any rate, neither the pilot nor I had ever been to Tegucigalpa, so neither of us knew just where it was or how to get there. But we did—via San Pedro and other points not in the direct line—and this little two hour and a half spin occasioned the following letter to friends up north*):

Tela, March 4, 1924

BELIEVE it or not, I have just completed a round-transcontinental trip by air—from Tela to Tegucigalpa yesterday, and back to the Atlantic today. Not a drop of blood was spilled. Listen to the horrid details:

In order to send shivers of apprehension up and down the spine of at least one insurance company, I arranged to fly to Tegucigalpa. The time came to make the trip but there was another passenger who was in a rush to get to the capital, so I was stalled off. But I was promised the very next trip, rain or shine, fly or fall.

So the plane flew off through the clouds with the favored passengers. Three hours later we learned that the motor had stalled and that the pilot had made a forced landing in a wild, rocky ravine, a hundred miles short of his objective. This was accomplished at no great benefit to the plane, as you can imagine. However, I was next on the list, and after the stand I had taken, I couldn't get out of the thing.

So you behold me at the landing field in greasy flannels and a pair of ear-muffs, ready to depart. The pilot smiled pleasantly as he nonchalantly went over the machine, tightening up struts and checking up things. The tail of the plane drooped sadly. I called his attention to this, but he shrugged his shoulders and allowed as how they "got that way after a while."

So I crawled reluctantly into my hole and interested myself in the controls. So did the pilot, and before I knew what it was all about we were lurching and jolting along at an increasing rate of speed. Then with a sickly sort of feeling inside I peered out to see the neat rows of grapefruit trees flashing by, while a couple of comrades waved a cheery adieu.

That journey to the capital was a nightmare. In the first place, you get the same sort of feeling that comes to you as you cross the Great Lakes on a ferry-boat. Then there is the delightful odor of gasoline and oil. But what is this compared with the knowledge that there are ten thousand feet of air below you, and only the dinkiest of floors holding you? Ugh . . . .

Before I knew it we had passed the last frontier of Banana Land and I looked down on a sea of sugar-cane and a ribbon of water that I did not know. Then came San Pedro and I rose from my roost to scream in the pilot's ear that we were way out of our course.

He heard my voice and turned off the motor. "Huh?" he asked with a broad grin.

"Turn that engine back on, brother," said I. "You're off the course, but that's better than this horrible feeling of dropping off into space."

"Grab the stick there and try 'er," he suggested.

I spoke a few earnest words to him. Evidently he saw the justice of them and caught the real note of sincerity in my voice.

We proceeded under full steam toward the mighty mountain range looming up before us. Then we went into fuzzy vapor. We drove on with a roar through the damp clouds for perhaps fifteen minutes. Honestly, I had no idea of our direction, nor could I quite determine whether we were upside down or not. A most uncertain state, I assure you.

Out we popped just as suddenly. And what a view! Rolling prairie lands as far as we could see. Mighty river bottoms and that great range behind. We were at an altitude of over ten thousand feet.

Flicking our wings, we plunged toward the earth. Trees rushed up to us. We swerved. There was a hamlet. A road. We were on the right path!

We got to Tegucigalpa finally. The city lies snugly behind a mountain that obscures it until you are right on it. Then the gaunt towers of Toncontin, the radio station, stand out against the mountain wall, and the field lies right beside them.

I retired and slept the rest of the day. I was exhausted. You can still see the imprint of my fingers on the side of that plane . . . .

But we had it all to do over again the next morning. We rose at daybreak and the pilot took me over the spot he had side-slipped into the previous trip. He turned off the motor and suggested a demonstration. In an impassioned, quivering tone I entreated him to go on—urgent business called me back to Tela.

So we circled up, up, up over the sleeping city below. We required much elevation before we could get over the range. For three hours we flew at altitudes of 2,000 to 15,000 feet—now over misty, purple mountains, now deep down in cool valleys. The wonders of the changing terrain really began to impress me. I forgot my fear and lost myself in the enthralling scenes about me.

The mighty mountains, roaring rivers, waterfalls (so near us that we could feel the spray) and deep, mysterious gorges flashed past us. Later the rolling, barren hill lands, and finally the lush, alluvial valleys of the North Coast.

And then the sea—an azure fan of purest color, infinite in scope. That scene will stay with me till my dying day.

At other times we flew above a veritable ocean of clouds. I might have been Little Nemo in another world. Nothing but undulating hills and valleys of silver and snow, over which the machine skimmed jauntily on her way home. Then a deflection of the wings. Down into the dampness and obscurity we would plunge. And then suddenly, as if nature swept aside her canopy in a gesture of indignation, so the lovely land, pine trees and lakes would suddenly flash up to us, thousands of feet above.

WHAT a thrill that trip was! And to try to speak adequately the glories of Honduras from the air would require words to be found only in the celestial dictionary. That sparkling sea, the delicate curves of the beach line, the tiny, tiny ships on her mobile surface, the distant flash of the Bay Islands not visible from the ground—a panorama of such breadth and color that it would make you gasp.

Then those grapefruit trees again! Like a Japanese garden, so neat, so green, so beautiful. You have no idea how beautiful that land looked. And then we headed down for it, engine cut off, trees reaching vainly for us. Over a vagrant cow, and then that welcome bump of wheels on terra firma.

Like a trip to the dentist, you have a feeling of accomplishment when it is over, and you know it has done you good. But you carry memories with you, and you don't care to repeat the performance.

Which explains how I feel about aviation . . . .

Boy's 31 Cents Buys Champagne for Sea Friends

"BUDDY" HUGHES, six, is an appreciative soul. "Buddy" was coming north on the UNITED FRUIT liner *Carrillo* when "Pat" Ryan, Assistant Steward, discovered "Buddy" had a birthday. He and the other officers arranged a birthday cake and a celebration.

Half hour later "Buddy" slipped up to the bar and hauled forth 31 cents, asking "Say, can I buy a bottle of champagne for the officers of this ship? They've been good to me and I want to be good to them."

He got the champagne.

—*New York American*, Feb. 29, 1928

Diet and Health

By

Dr. William E. Deeks
General Manager Medical Department

Dr. William E. Deeks

THE natural longevity of man is directly influenced by several factors. Among the more important of these may be mentioned inheritance, environment, occupation and nutrition. Man has succeeded in his "Struggle for Existence" because of the development of agents of defense, external and internal. By means of his intelligence, he has been able to devise methods of defense and offense against external enemies. As the gift of his inheritance, he possesses internal defensive agents which are shared by the whole animal kingdom. These are many and elusive; they exist in his tissues, and are both cellular and humoral in character. By these means man has waged a defensive and offensive battle against his enemies including infectious diseases—many individuals succumbing, but, *homo sapiens*, as a race, surviving. To this end, environment, hygienic and climatic, is a contributing factor, as well as occupation—many forms of which predispose to disease. Of all the factors concerned in the maintenance of health and the longevity of man, nutrition undoubtedly plays the most important rôle, as it concerns all individuals and is daily essential to existence.

It has been definitely determined that an inadequate diet, deficient in quantity or quality, may not prove permanently deleterious over a small percentage of the life-span of an individual, whereas if this period be prolonged, serious results follow, either by lowering the resistance of the defensive agents of the body in their struggle against the invasion of infectious organisms, or by predisposing to the deterioration of the tissues and their functions, thus resulting in organic degeneration, early senility, and premature death. Unfortunately, this progressive degeneration is insidious, and frequently the damage is irreparably done before symptoms are manifested. The importance of adequate nutrition, therefore, in the process of growth, tissue repair, and in the maintenance of health must be stressed if a prolonged and healthy existence is to be realized.

A GENERAL survey of the health conditions of the civilized races at the present time discloses that there is an appalling percentage of sickness and suffering, and though we have learned the causes and methods of control of many diseases which scourged the world in the past, such as plague, cholera, smallpox, yellow fever, malaria, typhoid fever, hookworm disease, tuberculosis, diphtheria, pellagra, scurvy, rickets, etc., yet premature decay and loss of teeth are well nigh universal, and there is a constantly mounting percentage of deaths from arterial degeneration, heart and kidney diseases, cancer, etc.

The increasing percentage of deaths from certain forms of disease among civilized races is not the outcome of poverty or of indifferent sanitation, as at the present time individuals as a whole are probably better housed, better clothed, more cleanly in their habits, and more abundantly provided with foodstuffs, than at any previous period of history.

As a result of clinical experience, we seem justified in stating that the fundamental cause of many of the ills from which humanity suffers rests mainly on the deficiencies of essential factors in the otherwise abundant food supply.

Primitive people live for the most part in scattered small communities, and their food-

stuffs are locally produced and primitively prepared. When these become scarce, they migrate to localities where fresh supplies are obtainable.

This nomadic method of existence is incompatible with modern centralized communities, as habitations are permanently located and food supplies must be brought to them. This has necessitated the development of transportation facilities—which have become such important factors in the life of all civilized nations—and of methods of preservation of foodstuffs, many classes of which in the natural state cannot be transported without suffering deterioration, nor indefinitely kept in storage without becoming worthless. Furthermore, civilized people prefer foods which in appearance and taste appeal to their aesthetic sense. To meet these demands of civilized communities, producers, manufacturers and shippers have evolved methods of refinement in the preparation and preservation of foodstuffs and of their transportation which, in many instances, have resulted in depriving them of essential elements necessary to normal development and the maintenance of health.

These facts have been appreciated only in recent years through biological investigations, which have been pursued by a large number of scientific observers. An enormous amount of new data has accumulated which is not readily accessible to those interested in health problems from the standpoint of nutrition; therefore, a brief reference to some of the more important recent discoveries seems desirable.

THE intelligent and well-informed now realize the importance of a well-balanced diet in the maintenance of health and the insurance of normal longevity; but there is still a lack of comprehension as to what the essential factors are in a so-called "well-balanced diet," largely because the sources of our knowledge concerning foods are widely scattered and difficult of access to laymen.

Food Requirements

Food is required for growth, restoration of tissue lost through wear and tear, and the production of heat and energy (muscular and nervous), obtained by the combustion of foods through a process of oxidation, or a union of oxygen from the air with the ingested foods after the manner of the burning of wood or any other combustible.

We obtain our food supplies from the animal and plant kingdoms and also from the inorganic world—the last in the form of chemical elements or salts. Plants are able to synthesize or build up complex substances such as proteins, fats, starches, sugars and vitamins, from water and mineral elements in the soil and air with the aid of heat, light and electric radiation from the sun; but animals require these complex foods already formed either from animal or plant sources. The necessary food factors in an adequate or well-balanced diet consist of (a) proteins; (b) hydrocarbons or fats; (c) carbohydrates or starches, sugars and cellulose (from which paper is made); (d) mineral elements; (e) vitamins, of which six have been identified and designated A, B, C, D, E and F.

Proteins—Proteins contain only the nitrogen elements of animal and vegetable tissues and are absolutely necessary in some form as food for the animal organism. Chemically they consist of amino acids, at least eighteen of which are known, bound together in various proportions by chemical linkage; and protein digestion in the alimentary tract consists in the maceration and separation of these combinations into their respective amino acids. When they are absorbed into the circulation, some of these are reshuffled and in combination with the alkaline inorganic salts and water are recombined to build the respective tissues necessary in new growth and in replacing those tissues destroyed by wear and tear. From the greater part of the amino acids the nitrogen radicle is split off and the rest is utilized for heat and energy after the manner of fats and carbohydrates.

Sources of Proteins—

(1) Animal Sources — Muscle, flesh foods (from the ox, sheep, etc.), poultry, fish and shell-fish, etc., the glands of animals (liver, kidneys, etc.), eggs, and milk and its derivatives (cheese and butter).

(2) Plant Sources—Cereal grains and their derivatives; and legumes (dried peas, beans and lentils). These contain from 8 to 20% protein. Nuts also contain considerable quantities of protein.

The proteins from plant sources are considered less valuable for tissue building than those from animal sources.

Hydrocarbons or Fats—Fats are derived from animal and plant sources and are absolutely necessary in a satisfactory diet, not only because of their high energy-producing value but also because of their intimate association with Vitamins A and D. Fats should not be consumed in excess of from 3 to 4 ozs. daily. The amount consumed will depend

upon the character of the fats, as some are more digestible than others; the amount of energy expended; and the temperature of the environment in which the individual lives.

Fats can be utilized only in combination with carbohydrates, and unless these are present in sufficient amounts and normally metabolized in the tissues, acetonemia (a form of acidosis) develops; a condition frequently encountered, particularly in diabetes, when insulin deficiencies prevent carbohydrate utilization.

Sources of Hydrocarbons or Fats—Muscle meats contain from 2 to 29% fats; bacon and fat pork more. Bacon and butter fats are the most digestible forms of animal fats that we know of. Vegetable oils are also valuable sources and readily digested.

Carbohydrates—The carbohydrates (sugar, starches and cellulose) in gross weight represent about five-sevenths of the food in normal diets, or over three-fifths of its heat-producing value. They are obtained from different sources that have different food values.

Cereal Grains—Cereal grains, in addition to their starch content, are also a valuable source of protein of which they contain from 10 to 16%. Like meats they have an acid ash. Their use as food dates back to the earliest historical records. Primitive races pounded and parched them and the whole grain was consumed. In consequence the full natural supply of vitamins and mineral salts was utilized. Furthermore, the mastication of hard grains assisted in the maintenance of a high resisting power on the part of the hard structures of the teeth. About fifty years ago the milling processes of preparing cereal grains for consumption were introduced. These removed the germ and outer bran layers which contain the vitamins and most of the mineral salts. Therefore, the refined products, though improved in keeping qualities, appearance and taste over the more primitive products, are not only deprived of their vitamin values but also of most of their mineral elements, and consequently in an adequate diet are deficient in sodium, phosphorus, calcium and chlorine. We are all aware how extensively refined cereal products enter into the diets of civilized races in the forms of bread, cake, pastries, macaroni, vermicelli, spaghetti, polished rice, corn flour, breakfast cereals, etc. They are the cheapest foods available, as more heat and energy per unit of cost can be obtained from them than from any other source of nourishment.

Important sources of starch are also the tubers and fleshy roots, and these should be utilized to a greater extent than they now are because in addition to their valuable starch contents, they have an alkaline ash, contain important vitamins, and also furnish bulk, which is necessary to good alimentary digestion.

Mineral Elements—The various tissues of the body are built up from fifteen mineral elements: namely, oxygen, carbon, hydrogen, nitrogen, calcium, phosphorus, potassium, sulphur, sodium, chlorine, magnesium, iron, iodine, and traces of fluorine and silicon. The structures of the teeth are made up mainly of dentine, enamel, and the central pulp. Dentine contains organic matter about 28%, calcium phosphate about 67%, and also small amounts of calcium carbonate and magnesium phosphate. The enamel of the teeth contains nearly 90% calcium phosphate. From this it can be seen that calcium and phosphorus are two minerals of great importance in the structure of the teeth. Calcium which enters so largely into the structures of bones and teeth is necessary also to the clotting of blood and the curdling of milk, the digestion of fats, and the regulation of the heart muscular contractions.

Nature is adaptable to urgent needs and when diets are deficient in contents necessary to the existence of the organism as a whole, or in part, she draws on her reserves; and in the case of calcium and phosphorus, there are the bones and teeth. If you feed carnivorous animals on muscle meats only and do not include the bone, the bone structures of the animal are drawn on to furnish the deficiences in the diet. This is easily demonstrated by X-ray examination.

Vitamins—During the last twenty years we have learned much about vitamins, and six of them have been identified through the experimental feeding of animals. The vitamins have not been chemically isolated, but we know them by their effects on vital activities. An adequate diet necessitates definite quantities of all of them, and as McCarrison states—"Without their presence, food, in a sense, is dead." Man and most other animals cannot synthesize them, and they must be taken in food, either from the animal or vegetable sources.

Vitamin A deficiencies in the food intake lead to the retardation of growth in the young, a lowering of the resistance to infection of the superficial structures of the eyes,

mouth cavities and its glands, skin and its glands, sinuses, bladder, lungs, stomach (part), and these Vitamin A deficiencies also play an important rôle in the formation of calculi in the bladder, kidneys and gall-bladder.

Vitamin B deficiencies in food cause loss of appetite, atrophy of the intestines, liver, heart, pancreas, genital and ductless glands, and are responsible for the well-known disease called beri-beri.

Vitamin C deficiencies are responsible for the development of scurvy, but their effects on the dental structures are most striking and important. Dr. Percy Howe of Harvard and others have investigated these by animal experimentation and some of their findings are briefly referred to:

One of the first observed manifestations is a shrinkage of the pulp from the dentine, of which the hard structures of teeth are mainly constituted, and in the separated space fluid collects. As the pulp becomes separated from the dentine naturally the organic matrix in which the mineral salts of the teeth are imbedded is deprived of its nourishment and becomes liquified, thus liberating the mineral salts which are reabsorbed into the blood stream. Other associated bone structures also suffer. Recession of the gums follows, and the teeth soften, loosen and may fall out. Because of the resulting lowered resistance of the involved tissues, bacterial invasion of the roots and gums takes place. Howe believes that the organic matrix of the enamel is supplied directly with the nutritive elements through the underlying dentinal structures, and he has in animal feeding experiments demonstrated that the enamel suffers in unbalanced diets along with the other tooth structures. In other words, the resistance to decay of the teeth is largely from within and not from local oral conditions.

Diets deficient in Vitamin C also interfere with the development of the facial bones and dental arches, leading to crowded and crooked teeth. These defects may be determined prenatally if the mother's diet is deficient in Vitamin C.

Vitamin D deficiencies in conjunction with an unfavorable relation between the calcium and phosphorus elements of foods and the absence of sunlight, lead to rickets, a disease associated with defective bone formation, muscular relaxation, digestive disturbances, nervous irritability and skeletal deformities. Recent work has confirmed that one ten-millionth of a gram of ergosterol (a plant derivative), which has been subjected to ultra-violet radiation, will prevent rickets in a rat, and a daily dose of two milligrams will cure human rickets.

Vitamin E deficiencies lead to sterility; and Vitamin F to defective lactation.

Sources of Vitamins—They are found in the following edible foods in quantities sufficient for protection:

Animal Tissues—Liver, kidneys, pancreas, glandular fat organs, eggs, milk and its products, also the intestinal viscera, which are not generally eaten by the civilized races. They are practically absent in the muscle meats which are generally utilized as foods.

Plant Tissues—(A) Cereals—They are present only in the germ and outer layer of cereal grains, and these are removed in the milling processes. They are consequently absent from white flour and all its derivatives, such as bread, cake, macaroni, spaghetti; from polished rice; refined corn flour; also, from almost all forms of breakfast cereals.

(B) Legumes—(dried peas, beans and lentils)—They are present and generally distributed throughout the seed, but in insufficient quantities for protection, particularly Vitamin A, unless the seeds are sprouted and consumed in this manner.

(C) Tubers and root vegetables contain generally sufficient amounts for protection. Raw carrots are rich in Vitamin C. White potatoes have no Vitamin A.

(D) Leafy green vegetables are generously supplied with almost all vitamins in amounts ample for protection.

(E) Fruits and nuts are generously provided with Vitamins A, B and C.

Cod-liver oil, egg yolks and liver tissues are particularly rich in Vitamin A. Recent work would seem to demonstrate that the liver fats of sheep, calf and ox, are ten times as rich in Vitamin A as is cod-liver oil. This may be one of the many reasons why liver is so highly recommended in the treatment of pernicious anemia.

WE must also consider the rôle played by bacteria of which several hundred species have been identified. Some are disease producing and others are not. The latter group may be subdivided into either those that cause fermentation, decay in organic matter, or are color producing.

The human body may be likened to a hollow tube. The skin covers the outer surface; the alimentary canal is the hollow; and between these surfaces is the body wall, con-

sisting of the frame work, muscles, circulatory system, etc. Millions of bacteria, disease producing and others, are found on the surface of the body and they also inhabit the alimentary tract. Under normal conditions they do not enter the structural tissues of the body wall. When they do several species cause diseases, which may prove fatal. They are prevented from entering the tissue structures by the defensive agents of the body which exist in the cells and body fluids. When the defensive agents are in a healthy condition, normally functioning, the defense against bacterial invasion is at its maximum. If, however, the defensive powers and activities are lowered from any cause—fatigue, malnutrition, excessive cold or heat, or toxins, etc.—bacterial invasion is prone to occur. Some forms of disease-producing bacteria do invade the tissues, but the cells and body fluids react and produce antibodies which neutralize the toxins and enable the defensive agents to destroy them. Immunity, temporary or permanent, results. If the battle waged between the invading bacteria and the defensive agents of the body is a losing one, the victim dies.

FORTUNATELY, nature is kind and gives us timely warnings before serious conditions develop from the ingestion of unbalanced diets. Among these may be mentioned dental decay, periodical headaches, acne, eczema, boils, constipation, recurring bronchitis, some forms of asthma, and many other light affections. These conditions are directly traceable to a deficiency of vitamins and mineral elements in our otherwise adequate food intake, and an improper balance between the acid ash foods and the alkaline ash foods ingested. When we consume excessive refined cereal foods and other derivatives, naturally we do not take sufficient amounts of root, leafy, vine and green vegetables, and fresh fruits. We can obtain a properly balanced diet, complete in all food factors, from the following sources:

(a) Animal derived flesh foods, including poultry and fish; eggs; milk and its derivatives, cheese and butter. The liver, kidneys, and pancreas of animals are particularly valuable because of the character of their protein and rich vitamin sources. Milk and cheese are also of great value because they are richer in calcium than any other known foods.

(b) Animal fats in the form of butter, bacon, etc., can be utilized to the extent of and not exceeding three ounces daily; but these may be replaced in part by vegetable oils which have similar caloric values, though they are deficient in vitamins.

(c) The refined cereal-derived foods must be restricted to from three to four ounces daily.

(d) Artificially sweetened foods and drinks should be taken only in the greatest moderation.

(e) The bulk of the carbohydrate intake should be in the form of potatoes (Irish and sweet); fleshy roots (carrots, beets, onions, parsnips, etc.); legumes (dried peas, beans and lentils). The last group also has a valuable protein content.

(f) There must be a generous intake of leafy green vegetables (cooked or raw), such as cabbage, spinach, celery, lettuce, endive, etc.; the fruit of the vine (tomatoes, squash, pumpkins, melon, etc.); and fresh fruits and nuts.

All meats and cereal-derived foods contain an acid ash; fats have a neutral ash; and the other foods referred to above have an alkaline ash content, including milk and even citrus fruits.

The blood is normally slightly alkaline and this condition must be maintained if we are to lead a healthy existence and possess the optimum resistance to disease and tissue degeneration. The alkalinity or acidity of the blood depends upon the character of the food intake, whether of alkaline or acid ash. It is far better to obtain this alkalinity through the ingestion of alkaline ash foods than by the necessity of continuously taking sodium bicarbonate, citro-carbonate, and much advertised alkaline waters.

We should also remember that the considerable cellulose and water contents of all vegetables and fruits furnish bulk and favor intestinal peristalsis and elimination, and are therefore very important for good digestion.

Our tropical employees should realize that the vegetables and fruits grown in tropical countries are just as wholesome and palatable as those grown in more temperate climates, and that it is a mere matter of adjustment of taste to locally produced fruits and vegetables. A great variety of vegetables and fruits, with ample protection from all standpoints, can be grown in the tropics without serious difficulties. We need only to refer to a few of these:

Vegetables—Sweet potatoes, yams, yuca, egg plant, chayoti, squash, tomatoes, peas, beans, corn, cabbage, okra, kalalu, cucumbers, peppers, etc.

Fruits—Bananas, plantains, alligator pears, mangoes, citrus fruits, mamey, naseberry, akee, coconuts, star apples, etc.

Unifrivolity

By W. M. P.

At the risk of being mobbed by the multitude of admirers of R. K., we venture forth with some trepidation as the perpetrator of this column.

UNIFRUITCO readers are being made the victims of a vicious April-fool joke.

We heartily thank R. K. for his generosity in allowing us to make use of the title of his late-lamented column.

We are wondering how Mr. J. Murcott's delightful illustration on Page 505 of UNIFRUITCO for March became separated from the printed matter on Page 510 with which it quite patently belongs.

The Passenger Department reports the receipt not long ago of this request:

"Will you kindly reserve separate cabins for my husband and me? My husband snores abominably."

The Company gladly complied with the request. Companionate carriage, we should say.

On Pages 87-88 of his most readable book, "The Banana," Mr. Reynolds asserts that "in the early stages of cooling, the amount of heat given off by the average cargo of bananas is about 8,000,000 British thermal units per hour." We respectfully suggest to the Fruit Dispatch Company in the interest of their midwest trade that they request the publishers to delete these pages from copies destined for Chicago consumption.

The following, which came from our genial friend, Mr. Dowling, of the Mail Bureau, is passed on to the UNIFRUITCO family as our choice for best-joke-of-the-month honors:

"There's a lady outside," reported the secretary to the busy executive, "who says she knew you fifty years ago."

"Very well," came the quick response, "you may wheel her in."

"Bananas Ripe in Bronx
Three of 14 Trees in Botanical Garden
Are Bearing Fruit."

—*Headline*

Some enterprising concern will undoubtedly secure a concession that will enable it to market the fruit under a snappy trade name.

We suggest "Bronx Botanifruit Bananas."

Already applications for employment in the Bronx are pouring in on us from young college men who have read of the wonderful opportunities that await men of ambition and determination in this new field of development, and who naturally associate any project for the cultivation of bananas with the UNITED FRUIT COMPANY.

In regard to applications, we quote the concluding paragraph of a recent letter applying for a place in the tropics:

"Fourteen years in railway married—One child Age 31 Best of health."

We are intrigued with the speculation as to whether or not this venerable parent desires to be accompanied by the strapping youngster.

Undoubtedly, the child was a better baby.

When the child shall have attained to an age of accountability, perhaps it, too, will wish to join our personnel.

Our monthly definition: Hip-flask—a kick in the seat of the pants.

We have been reliably informed that our good friend, Mr. J. C. Murphy, of the Cable Bureau in New York, was recently the recipient of a request from a Jewish charitable organization to lend his support to a benefit given on the seventeenth of March.

This is unquestionably a situation that is replete with possibilities.

A suggestion from Doctor Macphail of Guatemala as to the best method for preventing seasickness in a Scotchman is herewith offered:

"Place a quarter in Sandy's mouth and tie his hands behind his back."

A Brief Outline of the History and Development of the Refrigerator Car

By J. N. Kelley

Superintendent of Equipment, Fruit Dispatch Company

¶ Mr. Kelley is also connected with the Research Department of the United Fruit Company, and his interesting article is the contribution of the Research Department to April Unifruitco

IN order to fully realize the present day importance of the refrigerator car, one has but to visit the great markets of the larger cities and see assembled the great quantities of fruits and vegetables gathered together from all sections of the country. The development of efficient rail transportation of perishables during the last sixty-five or seventy years has had a marked effect on the growing of fruits and vegetables. It has made possible the utilization of producing areas possessing decided advantages of soil and climatic conditions which were formerly considered too remote from the market for use. Hand in hand with the extension of the producing sections and the gradual development of the present type of refrigerator car have come improvements in and developments of varieties of fruits and vegetables which possess better shipping qualities.

Present conditions contrast very sharply with those which existed before the general use of refrigerator cars. In the earlier days the farm and the orchard were located as advantageously as possible, the object being quick and safe delivery as against heavy losses and high costs for long distance non-refrigerated express shipments. The advantages of growing fruits and vegetables where conditions are best suited for commercial production have been fully realized for some time, and now the tendency seems to be to extend to even more remote sections where labor as well as soil and climatic conditions offer still greater advantages.

So far reaching has been this perishable freight service that today American refrigerator cars are crossing not only northern boundaries, but are in increasing numbers finding their way southward over the Rio Grande, thence far down into tropical Mexico. Like the root of a great tree, the service seems to seek out tender sections for growth and nourishment, always discounting distance while seeking favorable producing centers. The records of past performances bring into immediate view the great possibilities of further development of distant rail shipments. A far-sighted prophet has said that the tropics will one day feed the world. If this be so, we may rest assured that when the time comes the refrigerator car, perhaps a far different type than the one in use today, will play an important part, at least so far as this country is concerned, in the difficult job of distribution.

On July 1, 1926, there were 141,068 refrigerator cars in the United States, owned by railroads and private car lines. Of these, 45,835 were railroad owned, while the balance, 95,233, were privately owned. At the same time there were approximately 2,853 express refrigerators in operation, making a grand total of 143,921 cars of this general type in use, exclusive of all cars used by the meat packers. Since the record was taken by the Interstate Commerce Commission in 1926, several thousand additional cars have been built. In order to appreciate a little more fully what this means, let us go back a few years to trace quickly the gradual development of the unit and the pioneer companies which formed the nucleus of this tremendous service.

LIKE most other great developments, the perishable freight service started in a very small way, and it required great courage and much patience on the part of the early pioneers to finally launch it successfully. To anyone interested in this particular field, especially in the design and construction of refrigerated equipment, the early history of the car is immensely interesting, because full appreciation of all the difficulties encountered can be keenly felt and thoroughly understood. While definite information seems to be lacking on the first use of refrigeration in freight cars in this country, it appears safe to say that the first recorded experiments began about seventy

years ago. According to information compiled by Mr. R. G. Phillips,* the Pennsylvania Railroad, in 1857, rebuilt thirty box cars, to the limited extent of installing inside lining, filling the air spaces with sawdust, and installing ice-box at the doorway. Later, the ice-boxes were remodeled for suspension from the ceiling at the ends and the cars were then used for the transportation of meat. About nine years later Parker Earle, a strawberry grower of Cobden, Illinois, built a number of refrigerator boxes, each holding about 200 quarts of berries and 100 pounds of ice. According to the records this was probably the first attempt to refrigerate fruit in transit. His fruit box is now generally credited as being the forerunner of the present southern express container. At the same time the Pennsylvania Railroad was experimenting with its sawdust insulated cars, other experiments were in progress at Detroit which finally resulted in the issuance on November 27, 1867, of the first patent on a refrigerator car to J. B. Sutherland.

THE interest in refrigerator cars was quite pronounced at this time and the Sutherland patent was followed by a patent on an improved refrigerator car issued to D. W. Davis, September 15, 1868. The Davis refrigerator, cooled by ice and salt held in tanks, which could be refilled from the roof, proved to be one of the most widely used cars of the early days. Its successful use in the shipments of fresh meats from Chicago to Boston in 1869 is credited with inaugurating the dressed beef industry. The first attempt to ship a full carload of fruit under refrigeration was made in 1868 by Parker Earle, using the Davis car with strawberries loaded at Cobden, Illinois. Ice and salt in vertical containers, one at each end of the car, were used as the refrigerant. Part of this load was frozen and the rest unequally cooled, resulting in a loss. Later, however, successful shipments were made with strawberries from Cobden, Illinois, to Buffalo, New York, and with peaches from Dayton, Ohio, to New York. Earle continued his refrigerator shipments, but also experimented with the precooling of the fruit before loading. Finally, in 1872, he secured a still better car built under the Tiffany patent, designed to carry dairy products. This car had a V-shape ice bunker suspended from the roof which held 3,000 pounds of ice, a substantial increase over the ice-carrying capacity of the earlier cars. Investigations made by this tireless shipper apparently led him to the conclusion that in order to stand a three-day journey the fruit had to be precooled and that the car used must be well insulated and equipped with an ice bunker of at least 10,000 pounds capacity. While other men were engaged in the shipping of fruits and vegetables under refrigeration at this time, it is probably safe to say that Parker Earle deserves to be considered as the pioneer and first successful shipper of fresh fruits and vegetables under refrigeration. His untiring efforts to make successful shipments in the face of opposition and criticism had a great effect on the rapid growth that followed.

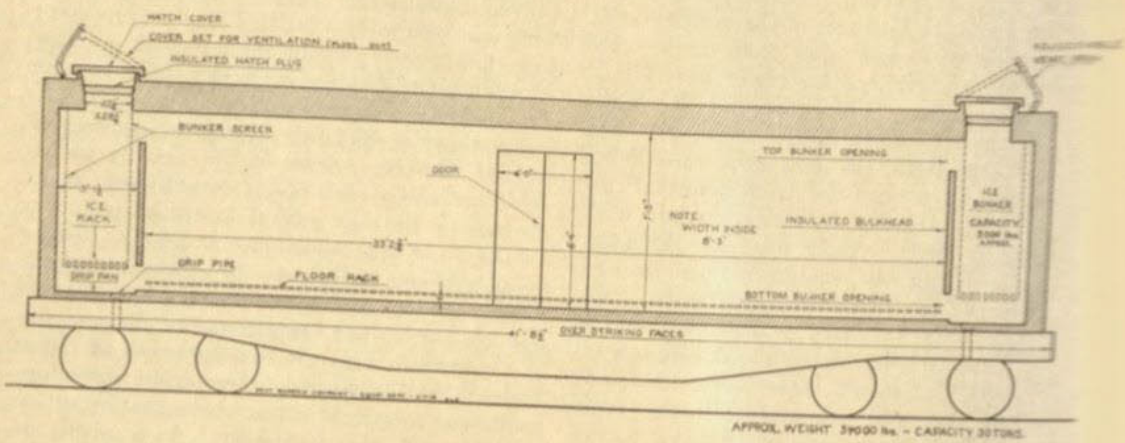
IN about 1875 the meat packers endeavored to interest the railroads in refrigerator service for dressed beef but, unsuccessful in this effort, they were forced to build their own cars. Ten cars were built by Mr. Swift in that year, but this small number rapidly increased to 6,000, while other packers followed. The first refrigerator line intended strictly for fruits and produce was started in 1886 by F. A. Thomas and Parker Earle, the equipment consisting of a total of fifty cars. These were owned by the Detroit Refrigerator Car Company and were operated over the Michigan Central. Later, on account of difficulties the California Fruit Transportation Company was organized to operate the cars. The Company grew rapidly from a total of 60 cars in 1888 to over 600 for operation in all parts of the country in 1891. This Company revolutionized the business of fresh fruit transportation with its successful shipments of strawberries from Tennessee and Florida to Chicago, as well as fresh apricots and cherries from California to Chicago in 1887 and 1888. The Company's remarkable success with these shipments, as well as equally successful shipments of strawberries and oranges from California, established for all time the usefulness and practicability of the refrigerator car. In this way the prevailing lack of confidence, due to the general belief that fruits kept on ice would deteriorate very quickly when removed from the car, was done away with. The car used by the California Fruit Transportation Company was known as the Hutchins Refrigerator. It was the first car built to hold 4 - 5 tons of ice, and because of the greater ice capacity it permitted the cooling of the load in transit, thus making it possible to eliminate the precooling of the fruit. These cars, well built and heavily insulated with four inches of wool

* R. G. Phillips, "Wholesale distributor of Fresh Fruits and Vegetables," pp. 179-181.

waste, were capable of making a five-day schedule run, delivering fruit in good condition with some ice still left in the bunkers. It is interesting to know that these cars were equipped with overhead ice tanks as well as with end bunkers. The success of the California Fruit Transportation Company led others into the field, the most important being the Goodell Line and the Continental Fruit Express, both entering the western trade with equipment in 1890. About this time Armour, who had refrigerator equipment for dressed beef, entered the fruit transportation field and a rate war followed which resulted finally in Armour's becoming the dominant interest in the California trade. The development of refrigerator equipment in the fruit and vegetable industry was not limited to the western territory but spread to other sections of the country. In the southeast in 1882 peaches were being shipped in box cars converted into ice-cooled refrigerators. The Austell Refrigerator Car made its appearance at this time and was followed shortly by other private car line equipment in competition for business in this territory. In 1898, however, the Armour interest contracted with the Central of Georgia, the Southern Railway, the Seaboard Air Line, and the Atlantic Coast Line, to furnish refrigerator cars for the business. This finally resulted in practically all of the fruits and produce from the South Atlantic states being carried in Armour-owned ice-cooled refrigerator equipment.

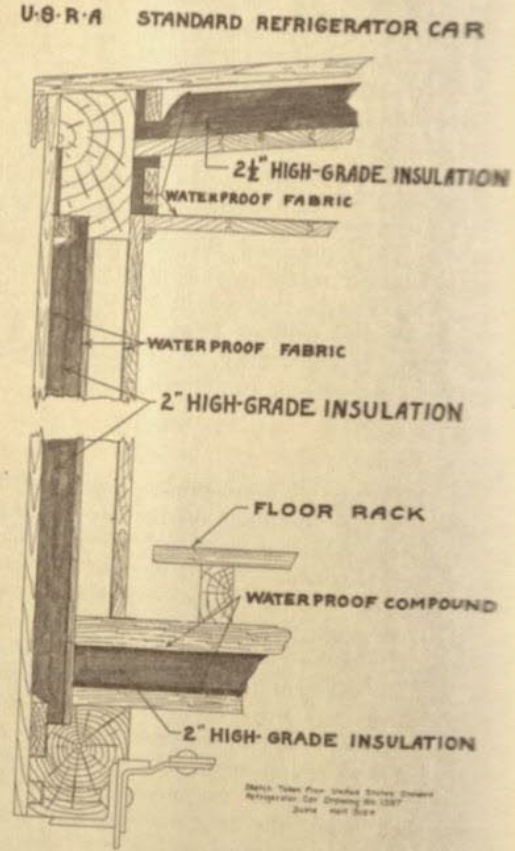
AT this stage of development many of the railroads were building refrigerator equipment, and in addition many private car companies were formed. The design of the cars built differed widely in construction, especially as to insulation, refrigeration and ventilation. In some cases little or no attention was paid to efficient insulation and the term "refrigerator car" was too often very misleading. As more difficult shipments were attempted it was found impossible to make good deliveries consistently. So much trouble was experienced with the peach shipments from Georgia that the growers called for help and advice from the Department of Agriculture. The losses were so heavy in this particular commodity that the Government consented to investigate the matter. The Department of Agriculture in 1903 placed Mr. H. G. Powell in charge of the work. In a very short time thereafter the investigations were under way, beginning with studies of picking, packing and precooling. Following this, observations were then extended to include studies of temperatures in transit. The result of the transit test proved conclusively that the refrigerator cars were not properly insulated and were, therefore, unable to prevent the entrance of heat. In addition to insulation defects the cars were not properly designed to provide adequate air circulation to efficiently utilize the cooling effect of the ice. Some of the cars in use at this time were very poorly constructed, many containing merely several layers of paper as insulation in side walls, roof and floor. Other investigations followed the Georgia peach transit studies and a great deal of work was undertaken by the Department of Agriculture in connection with the transportation of citrus fruits from California. Here again the equipment was found defective in the matter of insulation and air circulation. As a result of these defects the loads invariably had a large percentage of frozen or chilled fruit near the ice-boxes, while the top layers and those near the middle of the car were decayed or partly damaged because of the lack of refrigeration.

The Government reported on the result of its work in 1913, publishing at that time Bulletin No. 17 of the Department of Agriculture. The railroads and private car lines were very much interested in the investigation and willingly cooperated in the work. Having established the fact that, to be successful, cars must have adequate insulation, proper refrigeration and air circulation, the Department set about to study the conditions more carefully for the purpose of determining exactly what changes were necessary. Special thermometer equipment was first developed and then a number of cars were obtained representing various kinds and thicknesses of insulation, also including variation in ice bunker construction and other mechanical details. The electrical resistance thermometer equipment was especially designed to permit the taking of many temperatures throughout the car without the necessity of opening it. Twelve thermometers were used, as a rule, and these were advantageously placed to give correct information as to the effectiveness of the refrigeration and air circulation. With equipment of this kind and with trained observers to operate it, and with the specially constructed cars, built to include all the necessary variables, the Department was in a position to run comparative tests. Under the capable direction of H. J. Ramsey, Pomologist, in charge of handling and storage investigations, the Department conducted a large number of tests in all parts of the country, using various products shipped under varied weather conditions; a great deal of valuable information was thus obtained.



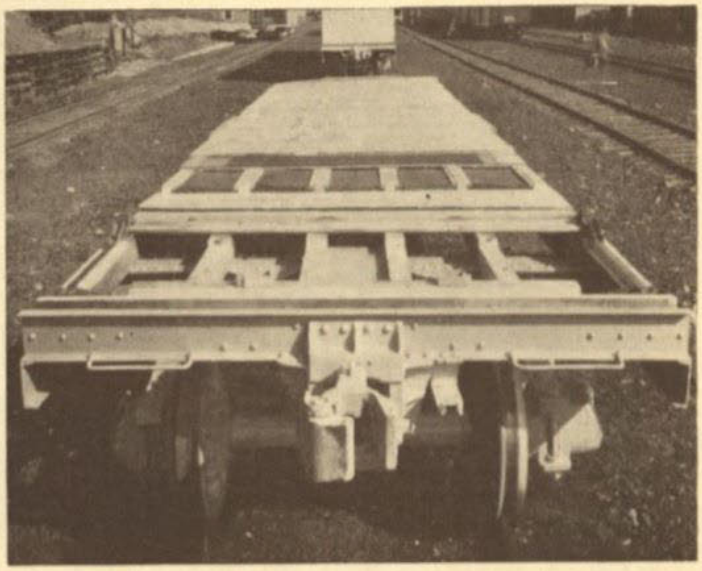
Above: Figure 1. Sectional diagram showing arrangment of Ice Bunkers, Bulkheads, Floor Rack, Plugs, Vents, etc., of general service refrigerator car in common use today

At right: Figure 2. Insulation diagram showing application and thickness of heat insulating material called for in plans and specifications covering the Government Standard Car (U. S. R. A. 1918)



SUMMARIZED briefly, the tests indicated that the wire basket type bunker, slatted floor racks 4" off main floor, and the reduction of splash-board to two-inch height, were features necessary to include in all new or rebuilt cars. In the earlier cars these features were not provided and as a result the air circulation was blocked or partially blocked at the lower bottom bunker opening, thus causing excessively low temperatures there, while not permitting the circulation of the cooled air to other parts of the load. The basket bunker permitted a freer passage of air around the ice and also exposed the air to a greater cooling surface, both points being considered by the investigators as great improvements over the ordinary box bunker. The installation of slatted floor racks and the reduction of the splash-board height allowed the cold air from the bunkers to flow freely under the load, thus circulating more freely to other parts of the car. Reference to the diagram of the refrigerator car, Figure I, will enable the reader to understand this more clearly. In addition to the points mentioned above, the experiments indicated the need for greatly increased insulation, as well as better methods of applying it. The constant motion, and the braced construction of car frame, made it difficult to find a method of insulation application that was entirely satisfactory. As a result of the tests, however, the Government recommended 2½" of high-grade insulation in the roof, 2" in the sides and ends, and 2" of cork in the floor.

When the railroads were under Government control, March, 1918, the Railroad Ad-

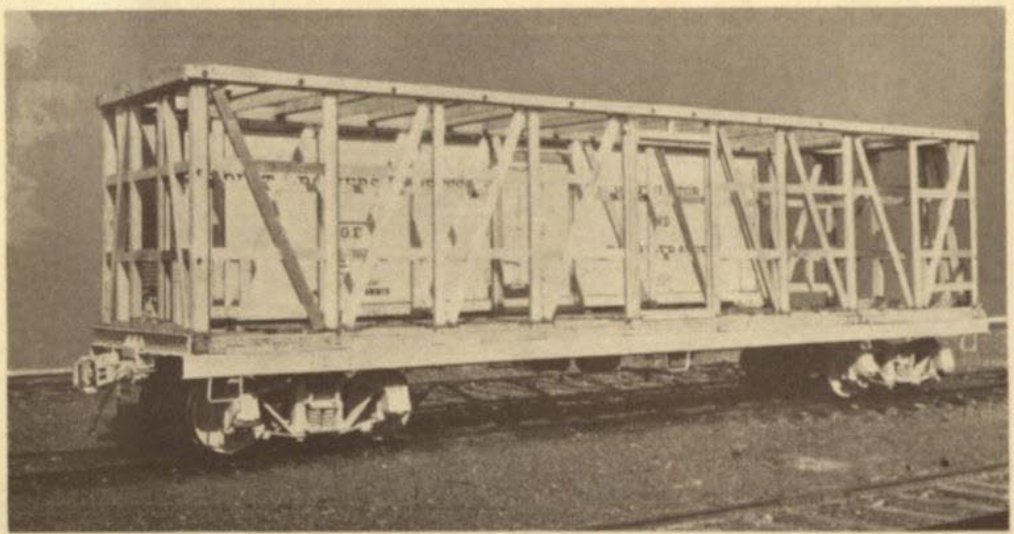


Photograph A—First stage of construction, showing installation of sills, floor insulation and decking

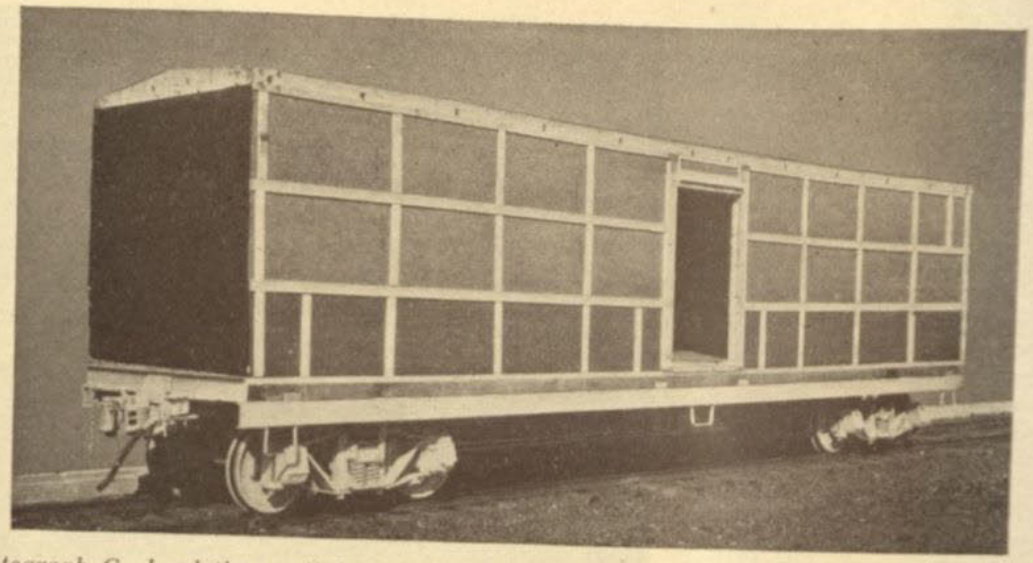
ministration appointed a Committee to prepare plans for a standard car. In deciding on the design the Committee took into consideration all the points studied by the Department of Agriculture and used to good advantage, the information obtained from the numerous tests. Following the completion of the plans, the Railroad Administration issued a circular to all the railroads, instructing them to build in accordance with the United States Standard Car drawings, when repairing or rebuilding refrigerator cars with trucks of 30-ton capacity or over. Since the preparation of these plans it is safe to say that a large percentage of cars built since that time have either conformed to these requirements or exceeded them. Diagram No. 2 gives a good idea of the insulation details as called for on the plans of the United States Standard Car.

While many minor changes in design resulted from the intense study given the problem, the same general design of the very early type is still found in the present day refrigerator. It is true that the construction has been improved, the insulation greatly increased and better applied, and that features such as basket bunkers, insulated bulkheads, depressed floor pans, etc., have been added. Notwithstanding these changes, however, the main design remains practically unchanged, the car still being an insulated box with ice bunkers in each end for cooling. The cars of the early days were of this type and depended upon sluggish air circulation for the cooling of the load. The earlier difficulties have been reduced in the newer cars, but not eliminated, and no radical change has been made in the design.

The present demand on the refrigerator is taxing it to the utmost and in the case of many perishables the car is not able to handle the load satisfactorily without resorting to drastic



Photograph B—Details of superstructure frame ready to receive insulation. Finished car may be seen in background through framing structure



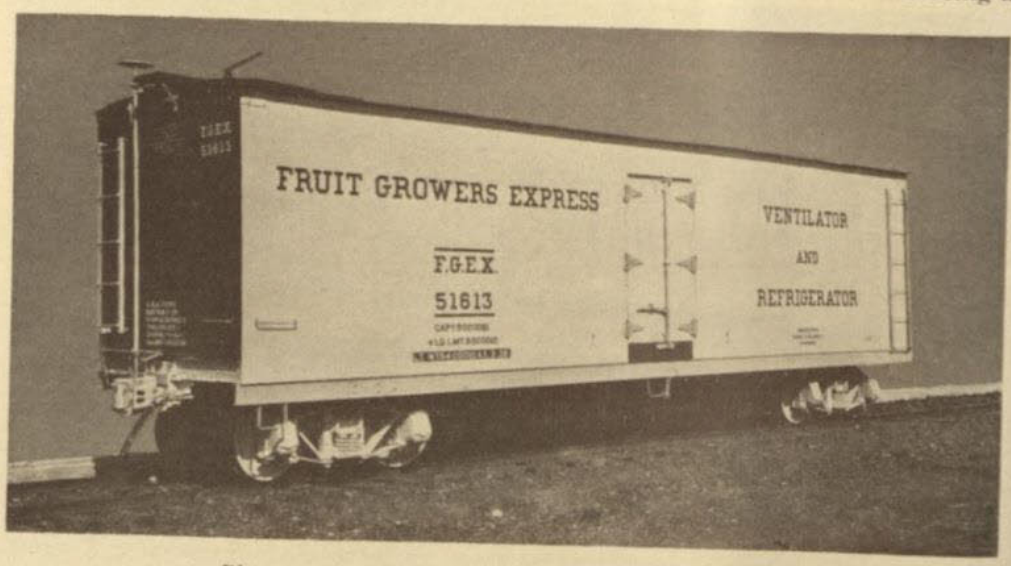
Photograph C—Insulation applied over superstructure. Frame now ready to receive siding

methods of icing, not only the bunkers but the packages throughout the load as well. Spinach, celery, lettuce, etc., are handled in this way.* The demand for a low temperature refrigerator car has been so great that in recent years the builders have had to increase the bunker capacity and provide for quicker ice meltage. In this way they have concentrated their attention on the problem of taking care of certain products requiring heavy refrigeration, but they have not given sufficient study to other perishables requiring entirely different treatment.

* Dr. Lon A. Hawkins, Physiologist of the Department of Agriculture, has recently completed investigations on the effect of body icing.

The refrigerator cars today are not only used for the shipment of perishables under refrigeration, but also for the protection of the commodity against chill in the winter months. Thanks to the greatly improved methods of insulation, this is not now as difficult as in the days when several pieces of paper were considered good insulation.

THE American Railway Association several years ago appointed a committee to work on the standardization of refrigerator cars. A sub-committee has been formed which is now cooperating with a committee representing private car owners, and efforts are being made



Photograph D—Completed car ready for service

to arrive at a definite understanding regarding the possibility of a common design, satisfactory for all perishables. The main committee and sub-committees have been functioning for several years, but to date nothing very definite has been suggested along this line.

The design in general use in the United States today conforms very closely to that shown in the diagram previously referred to, Figure 1. The cost of these cars insulated in accordance with the general details given and as shown in Figure 2, ranges from $2,500. up to approximately $3,000. The cars are built for thirty-ton capacity and weigh unloaded approximately 54,000 pounds. While Figure 2 indicates the insulation recommended for United States Government Standard Car, there are many cars built today that are superior in insulation efficiency. The illustrations show quite clearly the more important stages of construction of the type of car now commonly in use.

Enterprising Operator Prepares Original Bulletin

Chief Operator Angle of the S. S. *Santa Marta* displayed unusual initiative in calling the attention of the passengers to the flight of the Dirigible "Los Angeles" from Lakehurst, N. J., to the Canal Zone on February 26. Herewith is a reproduction of the press bulletin prepared by Mr. Angle, showing the map he drew to illustrate the route of the airship.

Tropical Radio—United Press News Bulletin

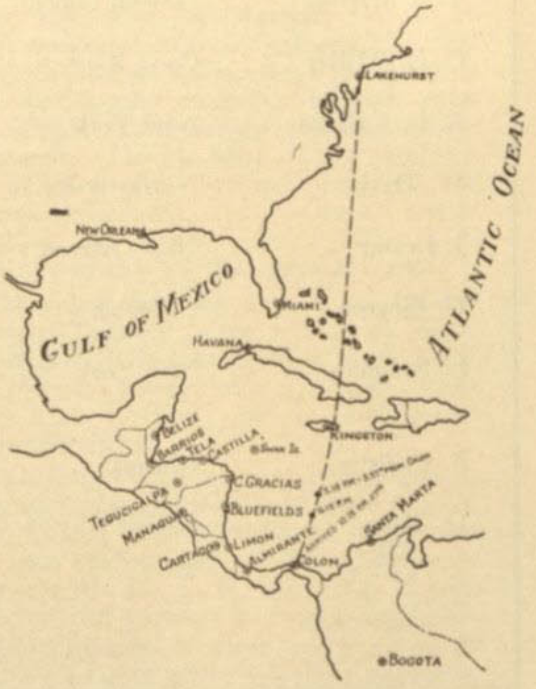
S. S. *Santa Marta*

February 27, 1928

WASHINGTON, D. C. 26th: The Dirigible "Los Angeles" took off from her hangar at Lakehurst, N. J., this morning at 6:15 o'clock in an attempted non-stop flight to France Field, Panama. This is the first attempted non-stop flight of a lighter-than-air craft to the Panama Canal Zone. It was undertaken as a training flight and to demonstrate the feasibility of such craft in commercial service. If successfully completed, the flight of approximately 2,200 miles will be the longest of the German-built dirigible since she flew from Germany. Two years ago she flew to Porto Rico.

Follow the flight of the Dirigible "Los Angeles", via Tropical Radio.

Flash bulletins of her flight will be posted as they are received.



LONG SERVICE ORDER

UNITED FRUIT COMPANY SALARIED EMPLOYEES WHOSE SERVICE DATES FROM 1901

Group IV

Name	*Division*	*Present Position*	*Date*
J. Bogle	Northern Ry.	Switchmen's Foreman	January, 1901
H. C. Curtiss	New York	Payroll Clerk	January, 1901
I. C. Evans	Banes	Manager's Stenographer	January, 1901
Q. Rojas	Banes	Clerk, Railway Dept.	January, 1901
A. E. Pietrie	Jamaica	Loading Supercargo	March, 1901
C. I. Sterling	General Office	Auditor	March, 1901
C. K. Miller	Costa Rica	I/c Wholesale Groceries	May, 1901
E. C. Calkins	New York	Research Department	July, 1901
W. Davis	Northern Ry.	Conductor	July, 1901
J. Leasor	New Orleans	Port Steward	July, 1901
G. Gnecco	Colombia	Fruit Inspector	August, 1901
L. Sussman	New York	Asst. Supt., Maintenance and Repairs	October, 1901
E. Christie	Panama	Captain, S. S. *Preston*	December, 1901
D. Pupo	Banes	Clerk, Material and Supply Dept.	December, 1901

Send Your Boys to the Citizens Military Training Camps

With the idea in mind that among UNIFRUITCO *readers there are undoubtedly many fathers or sons interested in the Citizens Military Training Camps movement of the United States Government, we are glad to cooperate with the Recruiting Publicity Bureau of the United States Army, Governors Island, New York, by featuring this movement in our journal.*

In 1926, *at the instance of Mr. Cutter, who desired thereby to carry out the Company's policy of indicating its interest in and cooperation with the United States Government, the Manager's office endeavored to have two or three employees attend the Citizens Military Training Camps and was successful in having two employees qualify for the Camp that year.*

Last year, 39,000 *young men reaped the benefits of this training, and this year similar Camps are to be conducted during July and August. Already the C. M. T. C. officers are being flooded with applications for such Camps. Necessarily, the policy of first come, first served, will be followed, and Lieutenant Colonel G. V. Heidt, Chief of Bureau, has requested us to state for him that early application for admission to these Camps is advisable. He has also asked that we release the following for our readers' benefit:*

CHIEF among the faults of the young American today are lawlessness (witness, for example, our homicide rate), love of ease, and willingness to avoid trouble at the cost of duty.

Chief among the virtues inculcated in youths at Citizens Military Training Camps are the opposites of these faults. Prompt observance of law; acceptance without complaint, and even with enjoyment, of hardship and simple living, and willingness in the course of duty to face danger and act the man in its presence—in a word, LOYALTY, is the prime attribute taught the C. M. T. C. student.

It is needless to point out to employers what a boon the Government project to build better American manhood is. There exists also, through the medium of these Camps, a great opportunity to develop a much better understanding between classes, a great opportunity to cement friendships which is invaluable in breaking the bitterness and jealousies so often evidenced in questions concerning capital and labor.

Boys make friendships easily, and the associations we make when in our youth are deeply impressionable, and lasting. Boys who show no distinction in dress, boys who undergo the same hardships, who live together in the same tent, work together in the performance of a common duty, from whom is demanded the same obedience to lawful authority, whose clothes must be clean, whose guns must all—rich and poor boy alike—be bright and free from dirt and rust; boys who eat the same plain, wholesome meals together, boys who share on the camp athletic field the same democratic games—these boys grow to understand one another immeasurably, and a mutual respect and admiration is firmly welded to endure through the years.

The Citizens Military Training Camps movement is one of the most commendable programs a benevolent Government has ever fostered, and is deserving of the greatest support from all employers of labor.

For four weeks each summer the C. M. T. C. student is under a rigid discipline, but his initiative is not dulled. He is living healthfully in the great outdoors. Marked attention is paid to his carriage and physical development. He has most of his afternoon free for recreation. Bathing, cleanliness, and neatness are stressed. He lives upon a simple, healthful, and plentiful diet. There is no question but that all this makes for good.

The young man who attends the Citizens Military Training Camps returns to his office desk or factory bench built up in health and renewed energy, with a loftier outlook upon life's problems, and a much better American citizen.

That large organizations, and huge corporations, recognize the benefits of these Government Camps, may be witnessed by the fact that each summer they not only heartily endorse the C. M. T. C. but, what is much more to the purpose, they encourage their eligible employees to attend and share in the manifold benefits of this American institution.

The Banana and Your Money's Worth

Bananas and Other Foods on the Basis of Weight, Food Value and Retail Price

By P. K. Reynolds

TODAY the housewife takes her basket—or her telephone—in hand to buy, not weight or size, but nourishment—the utmost of attractive body-building, health-giving food value per nickel on the counter. Why she so often picks out a "hand" of beautiful bananas is plainly shown below—and by authorities completely scientific and unprejudiced.

The first column represents the careful findings of the Bureau of Labor Statistics of the United States Department of Labor ("Monthly Labor Review," February, 1928, p. 168). The food units or Calories per pound as purchased next given represent the research of H. C. Sherman, Mitchill Professor of Chemistry, Columbia University ("The Chemistry of Food and Nutrition," 3rd edition, 1926, pp. 576-586). From these two columns the two others have been figured by Skinner, Sherman & Esselen, Inc., Consulting Chemists of Boston.

COMPARATIVE FOOD-UNIT COSTS AT RETAIL IN 1927

	* *Cost Per Pound As Purchased (in Cents)*	*Calories per Pound As Purchased*	*Cost of 100 Calories As Purchased (in Cents)*	*Calories Purchased for Five Cents*
Flour	5.5	1610	0.3	1465
Rolled Oats	9.0	1811	0.5	1005
Beans, navy	9.3	1565	0.6	840
Rice	10.7	1591	0.7	743
Bread	9.3	1182	0.8	637
Potatoes	3.8	302	1.3	398
Butter	55.6	3491	1.6	313
Cheese	37.6	1990	1.9	265
Milk, fresh	7.0	314	2.2	224
Rib Roast	31.3	1262	2.5	202
BANANAS	8.0	290	2.8	181
Chuck Roast	23.7	797	3.0	168
Pork Chops	36.8	1230	3.0	167
Onions	6.4	199	3.2	156
Corn, canned	17.8	455	3.9	128
Cabbage	5.3	121	4.4	114
Lamb, leg of	38.9	876	4.4	113
Sirloin Steak	42.6	960	4.4	113
Eggs, strictly fresh	30.0	594	5.1	99
Ham, sliced	55.0	1073	5.1	98
Peas, canned	13.4	252	5.3	94
Round Steak	37.1	649	5.7	88
Tomatoes, canned	9.6	169	6.0	83

* Certain items are shown in the United States Monthly Labor Review as purchased on other than the unit pound basis. To make the above table uniform, Skinner, Sherman and Esselen, Inc., have converted these items to the pound basis as follows:

Milk, fresh	14.1 cents per qt.	1 qt. = 2 lbs.
Bananas	34.0 cents per doz.	1 doz. = 4.27 lbs. (av.)
Eggs, strictly fresh	45.2 cents per doz.	1 doz. = 1.5 lbs. (av.)
Corn, canned	15.7 cents per No. 2 Can	No. 2 Can = 20 oz. (1.25 lbs.)
Peas, canned	16.8 cents per No. 2 Can	No. 2 Can = 20 oz. (1.25 lbs.)
Tomatoes, canned	12.0 cents per No. 2 Can	No. 2 Can = 20 oz. (1.25 lbs.)

These figures show that measured by food value and price the banana is surpassed only by such concentrated foods as the dry cereals, and a few others such as beans, potatoes, the milk products, and rib roast.

A fact that should not be lost sight of is that before being eaten most foods must be cooked—with, usually, a considerable loss of their Calorie value. As actually eaten, therefore, the banana, in comparison with such foods, ranks relatively higher in Calories than is indicated by the foregoing table.

Furthermore, retail prices of many foods are subject to considerable seasonal variation, while the market price of bananas is fairly stable throughout the year.

It is only fair to the banana to point out that Professor Sherman calculates the peel as representing 37 per cent. of the gross weight of the fruit and credits the banana with only 290 Calories per pound "As Purchased." On the other hand, the Research Department of the UNITED FRUIT COMPANY—as a result of a series of careful tests—has demonstrated beyond any question, that in a fully ripe banana the peel is only 30 per cent. of the total weight of the fruit. This puts the Calorie value per pound at 311 instead of 290.

Plant Life of Central America

(*Continued from page* 526)

be expected to produce valuable crops for many years, but in many parts of Central America the maize and other crops gathered during the one or two years that a virgin piece of ground is planted are worth little in comparison with the timber destroyed to prepare the land for tillage. Still, such a system of agriculture is perhaps the only one practicable in a region where the land is sterile.

The natural wealth of the tropical forests is undeniable. Everyone admires the rich variety of fine woods which they afford. Use of Central American timbers has been delayed only because of difficulties of transportation, and because of ignorance concerning their existence. Battles have been fought over the possession of the mahogany and logwood of the Atlantic coast, and the British possession of Belize resulted only from the fact that mahogany existed there. Spanish cedar, so plentiful in some parts of Central America, is one of the woods most essential to some industries of the United States, and no satisfactory substitute for it has been found. Rosewood and cocobola are two other Central American woods for which there is already a stable market. Ebony of handsome appearance is widely distributed, and there are hundreds, perhaps thousands of other woods with market possibilities.

Within the present space limits, it is impossible to do more than touch upon some of the most conspicuous features of Central American plant life. The subject is an intricate one, with a myriad of ramifications. Continued exploration will produce results of the greatest scientific and practical value.

Every visit which I have made myself to Central America has discovered dozens or hundreds of new trees and other plants, many of which still await names and descriptions. About Lancetilla this year I have found several trees which are new to science, and others whose known ranges are now greatly extended. There are several hundreds of new plants awaiting discovery along the coast and in the interior of Honduras.

A homesick Irishman had got a job as crossing guard for a railroad. The foreman handed him a red flag and a green flag, and told him, "Whenever you see a train coming, get out and wave this red flag."

"Git away wid ye job!" exclaimed Pat; "Me wave a red flag when Oi got a grane one handy. I'll starve first."

Hubby—I miss the old cuspidor since it's gone.

Wifey—You missed it before—that's why it's gone.—*Pathfinder*

Colombia

HIS many friends in Santa Marta sincerely regret the departure of Dr. E. I. Salisbury, who left on the *Zacapa* for Costa Rica. Dr. Salisbury, whose genial personality made him so popular here, has been transferred to Limon. Our best wishes go with him.

We take this opportunity of welcoming to the Division our latest arrivals: Mr. Laboon joins the Engineering Staff at Sevilla. Mr. P. J. Darlington, a graduate of Harvard, is to carry out the duties of Entomologist.

Mr. R. J. Watson, Manager of the Philadelphia Division, paid us a short visit recently. It is interesting to learn that Mr. Watson has been connected with the banana business for some 44 years.

A football match took place on February 17, when the *United Football Club* played a team from the S. S. *Camito*. Play was very evenly contested for the first part of the game, with keen tackling by both sides.

Whybrew opened the score with a good shot, followed by further goals from Gregory and Ker. *Result: United Football Club* 3, S. S. *Camito* 0.

The spirit of Carnival reigned in Santa Marta during the three days February 19, 20 and 21, when the customary pre-Lenten festivities took place. Decorated automobiles, filled with grotesquely clad merrymakers, paraded the main streets.

As usual, several well-attended dances were held at the Centro Social Club.

It is with regret that we chronicle the departure of Mrs. Salisbury who, with her little daughter, Ann Maureen, has joined Dr. Salisbury at Limon. Mrs. Salisbury, who was greatly esteemed here, will be missed by a large circle of friends.

Messrs. J. F. Magee and R. C. Kemp have returned from vacation, spent in the United States and England respectively.

Noteworthy visitors to Santa Marta, in the persons of Messrs. A. H. Stockley and J. A. Armstrong, arrived on March 2 on the S. S. *Coronado*. Mr. Stockley is, as everyone knows, one of the pioneers of the banana business in Great Britain and on the Continent, having been connected with the importation of the fruit prior to the formation of Elders & Fyffes, Ltd., in 1901; Mr. Armstrong is Secretary of Elders & Fyffes, Ltd., London.

Among the passengers accompanying Captain Drake to Kingston were the Duke and Duchess of Atholl. His Grace enjoys the distinction of 19 titles. He is the only British nobleman entitled to maintain an army of his own, having now 300 Atholl Highlanders as retinue at Blair Castle, Scotland.

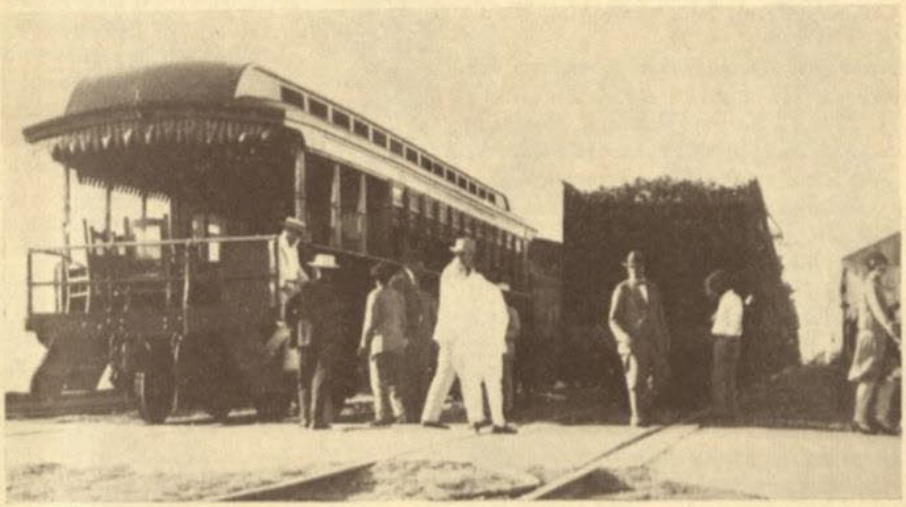
The Duchess, who is a member of Parliament, did valuable work during the War, and is an authority on educational matters.

"Yes, my daughter's very theatrical," said his new landlady to Jones. "Next week she's taking part in a Shakespeare play at her school."

"Oh!" replied Jones. "Which of his plays is it?"

"Well, now, she did tell me," said the fond mother, "but I really forget—I'm not sure if it was 'Nothing Much Doing' or 'If You Like It That Way'."

Preston



Mr. Cutter and his party visit the sugar plantations at Preston

PRESIDENT V. M. CUTTER, accompanied by Mr. Daniel G. Wing, a member of the Board of Directors, Mrs. Wing, Miss Wing and Miss Bruce, arrived in Preston on the afternoon of February 24.

The visit to Preston marked the conclusion of an inspection tour of Company properties in Central America, Jamaica and Cuba. Upon arriving in Preston, Mr. Cutter visited the mill, watched the grinding of cane, and asked innumerable questions as to the efficiency of the equipment that had been installed during the past dead season.

Following an informal talk on Company policy and plans which was given at the American Club House on Saturday evening, arrangements were made for all employees to meet Mr. Cutter.

Mr. W. W. Schuyler, Manager of the Cuban Divisions, called the meeting to order, and as Mr. Cutter needed no introduction, Mr. Schuyler simply drew attention to the fact that the President knew the language of the men in the field, for he too had been a field man, and what he might say would be with a full understanding of just how the men in the field would be affected by decisions made at Boston.

Mr. Cutter proceeded to talk in the sort of fashion that has made him a much sought-after speaker. "I know," he said, "that after I leave here some are going to say, 'Well, the old man was down and gave us a lot of hokum.' But it isn't hokum to tell you something of the plans which the Company has in mind for the improvement of personnel, development of business and the like."

He went on to point out the possibilities for promotion, the policy of the Company in selecting executives from the ranks, and briefly described the plans being formulated for attracting selected men to the employ of the Company.

The importance of stock ownership in the Company was touched upon, Mr. Cutter advocating the purchase of stock not only as a matter of investment but also upon the basis that an interested owner would appreciate to a greater degree the economies instituted to increase the efficiency of the entire organization.

Mr. Wing gave a short talk in which he stated that he had seen about every banana in the tropics, a couple of million acres of sugar-cane—or at least it seemed that way; had ridden on about all the boats and railroads, and hadn't noticed anything wrong so far; had no idea that he would, and in fact was ready to get back to Boston.

The informal talks were followed by dancing and refreshments. Later in the evening the party left for Saetia and spent Sunday fishing. Reports as to their success along this line are rather vague. As is the case with all fishermen, it is presumed that the biggest ones got away.

On Sunday evening, February 26, the S. S. *Zacapa* arrived off Saetia, and Mr. Cutter and his party boarded her for the return journey to New York.

A RECENT acquisition to the feminine ranks of Preston was Miss Mildred Keough, who arrived as guest of Mr. and Mrs. W. B. Smith.

New employees recently welcomed to the Division were: Mr. Howard D. Slingerland, for the M. & S.; Charles H. Lang, Foreman for the Locomotive Shops; and Russel W. Rassner, for the Merchandise Department.

As for transfers, Banes and Preston seem to be exchanging talent. First came Mr. E. A. Suarez, to take over the duties of Mr. W. H. Hopkins. Next we bid *adios* to our Chief Clerk, Mr. J. M. Dudley. Joe had been with us three years and we were all sorry to see him leave. We were somewhat compensated by the knowledge that Banes is not so very distant, and of course we know that he is going to be successful in his new position. Simultaneously, we welcomed Mr. E. H. Teagle from Banes as our new Chief Clerk, and, finally, we learned that Mr. W. M. Glennon had left Banes to join the force in our Trafico office.

Those who have left us: Mr. S. S. Woodward, Overseer of Juan Vicente Farm, and Mr. M. Bradley, Timekeeper at Biran, deserted the country ranks. The Radio Department is also minus Mr. Kay Thing, who has returned to the States. Mr. J. M. Lynch, our Chief Accountant's secretary, has been transferred to the Chiriqui Land Company.

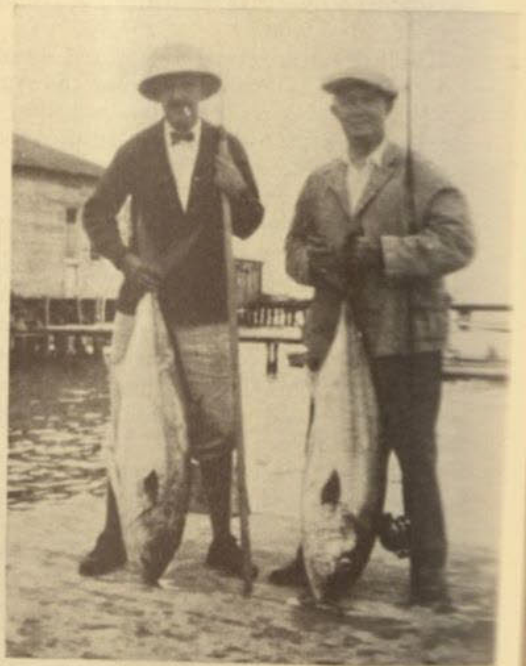
Deacon Hopkins, erstwhile *pescado y huevos* man, is gone, and if one can believe a deacon from Way Down East, he is never to return. For years on end Hoppy has been active as deacon of the local church, firm backer of the P. A. A., proprietor of the Cia. Pescadora de Preston, local representative of Huevos Frescos, general handy man for the ladies, and, last but not least, our Paymaster. No wonder that he can retire. When Hoppy left, his many friends presented him with a watch as a token of their esteem. As he is going "back on the farm," we had thought of presenting him with a plow or harrow, something that he would have forever before him, but found that he couldn't get it in the stage-coach.

He's going back to Nova Scotia, never more to roam,
He isn't even going to fish; he's sticking close to home.
Instead of pad and pencil, he'll walk behind the plow,
Or else be hoeing 'taters or sweating in the mow.
But when the wind is blowing—the leaves are off the limb—
We think he'll miss old Preston, the same as we miss him.

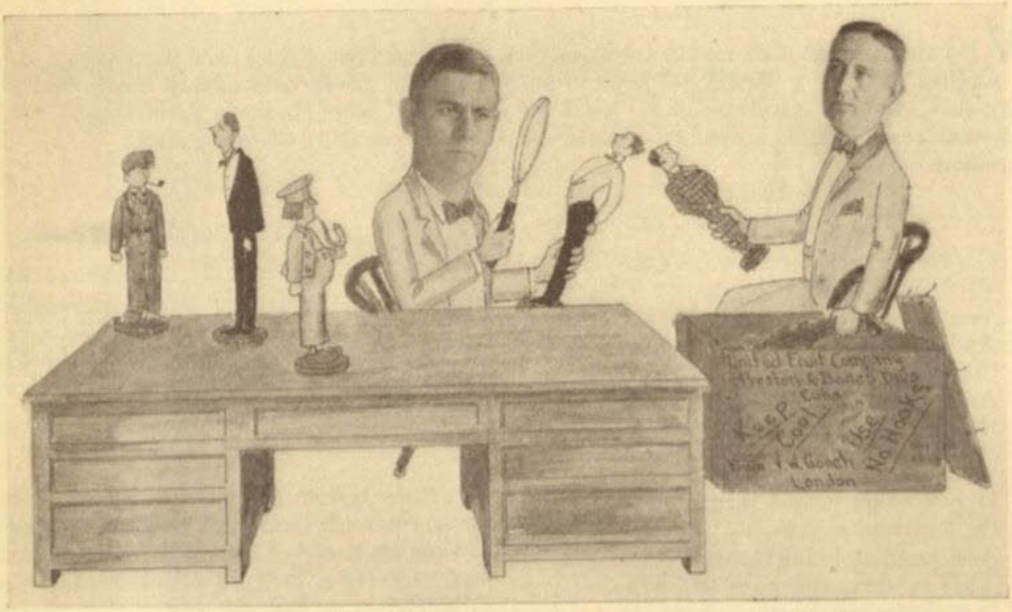
THE big ones are seldom landed, but King Cole and Charley French, Preston's disciples of Isaak Walton, always manage to do so, regardless of size, as this photograph proves. When asked to explain their secret about hooking the big ones, they replied:

Oh! A boom of iron makes a good fish-pole,
And a steam-winch serves for a reel;
And a two-inch cable for a line can hold
A six-foot hook of steel.

A fig for the seas and the howling gale,
As we fish from our storm-tossed bark,
Whenever we fish, we fish for whale
And our bait is a ten-foot shark.



King Cole and Charley French manage to hook the big ones every time



Here we have Mr. W. W. Schuyler, Manager of Cuban Divisions, and Mr. J. B. Trinler, Assistant to Manager at Preston, engaged in one of their favorite games and one at which they are expert—the selection and location of employees sent to them through the efforts of Mr. V. W. Gooch.

It might be likened to a gigantic game of chess or checkers. The ability of the new men as stated in their employment records is studied, and a decision reached as to just which square they are to occupy.

Baseball News

On Sunday, March 4, the P. A. A. Baseball Team was the guest of Central Baguanos. At ten o'clock the team and twenty royal rooters left Preston for the long ride to Central Baguanos, a distance of 55 kilometers. Upon their arrival, a luncheon consisting of *Arroz con pollo* was served at the Company Hotel.

In an exciting ball game that followed, our team added to its string of victories, by winning 6 to 4.

After the game dancing was enjoyed by all and at an early hour the team and rooters left for home, tired, but voting the party a success and one long to be remembered.

The entire Division was shocked to hear of the untimely death of Captain Homer L. Howell, who was killed on the afternoon of February 21 in an aeroplane accident at Port de Paix, Haiti. Captain Howell was for several years in charge of the work of importing laborers from Haiti for both Sugar Divisions and he had a host of friends in each Division, who sympathize deeply with Mrs. Howell and her three children.

THE question of the hour, so to speak, for Guaro, concerns the number of cars of cane loaded each day. The fact that this is the main thought in everybody's mind was proved on March 3 by the satisfaction expressed when the record for the number of tons loaded in any one day was broken, 416 cars being loaded, averaging 24½ tons per car, or a total of 10,200 tons of cane.

This naturally makes for a great deal of friendly rivalry among the hard working overseers as to who can load the most cane in administration switches. At the end of February, Mr. MacKenzie, Overseer of Cueto Farm, held the lead, having hauled an average of 166 tons per day.

On February 4 we welcomed Mr. D. H. Bates, who took up his duties as Timekeeper on Cosme Farm, and on February 22, Mr. L. E. Stephenson, who has been assigned to Mulas as Timekeeper in place of Mr. K. F. McCully, whom we congratulate on his promotion to Junior Overseer of Juan Vicente. Mr. E. A. Pierce has been promoted to Overseer of Vigia Farm.

WE cannot let another month go by without quoting some more lines by the poet in our midst, Mr. James R. Kilborn, who for some unknown reason, still insists on remaining anonymous:

TO A MULE

(Used as a mount)

Oh contumacious beastie
With your aggravating gait,
Your flapping ears and gentle eyes
And philosophy sedate—
Oft have I sat astride you,
And wand'ring patiently
Been plunged into reflection
On your personality.

If e'er there were a man or beast
Of contradict'ry moods
And fiendish brain (confound the same),
That schemes and waits and broods—
It must be you; your stubbornness
And deviltry unfair
Have given to my raven locks
Precociously white hair.

And so I hope the fates will hear
My pleadings, and endorse
A yearning I've developed
To obtain myself a horse.

And then—thou fiend incarnate
May there be a mighty flood,
And your character pernicious
Be swallowed up in mud!

An Apology

We present to Mr. R. C. Clifford of the Agricultural Department our apologies for not having credited him with the excellent article "A Day in the Cane Fields During the Crop" which was printed in March UNIFRUITCO.

Mr. Trinler, to whom the paper was credited, hastened to notify us of our error.

A little Jewish boy was standing on a street corner, making the welkin ring with great sobs and exclamations of distress. About him there soon gathered a large crowd of would-be sympathizers.

"What is the matter, my little man?" asked one of the crowd. "Are you lost?"

The boy ceased his wailing. "I am," he answered, "I'm lost. Won't you-all take me to Goldblatt's Cut-Rate Tailoring Shop, at 234 Rosen Street, which has just opened up a marvelous sacrifice sale on men's pants and suits at fifty per cent below cost."

WHAT H. W. Wing, our Superintendent of Merchandise, doesn't know about shoes isn't worth knowing. Doesn't he come from Lowell, Mass., which is only 26 miles from Lynn, once the greatest shoe city in the world? Brockton and Haverhill, other famous shoe cities, are also in Massachusetts. And Peabody, where they tan the hides that make the best leather that goes into the best shoes, is also near Lowell.

Mr. Wing has been selling shoes, together with other things, for the UNITED FRUIT COMPANY since 1915, when he was graduated from Dartmouth. While Superintendent of Merchandise in Honduras, his ambition was to shoe all the barefooted Indians in Central America. When this ambition was realized, he looked about for new lands that needed shoeing and when none could be found he was broken hearted. However, with the courage of the pioneer New Englanders, who have ever made history, he overcame his disappointment and in June, 1927, came to Preston where he still occasionally indulges in his favorite weakness when a customer comes into the store to look at shoes.

Puerto Castilla

It's click, click, click, with bananas sliding past,
And every single stem of fruit exactly like the last.
'Twas forty thousand yesterday, the same the day before,
It's fifty thousand stems today, and still they call for more.

A flume of smoke against the sky, a siren's hoarse refrain,
A fruit ship noses up to dock and drops her anchor chain.
A whistle shrill comes 'round the hill in answer to the sign,
And 'round the bend a pick-up train comes shrieking down the line.

Then it's click, click, click, as the counters start anew,
And every dog-gone dock-rat knows exactly what to do.
And it's click, click, click, and "Throw that stem aside,"
And "Shake a leg," and "Chuck that full, but let the others ride."

From lower hold to upper deck it rises hand on hand,
And what they do with all the fruit I can not understand;
But day by day and week by week the Fruiters come and go:
They don't give us a breathing spell and nary a chance to blow.

For it's "Whistle out the switching crew," and "Hurry out the mail,"
And "Hombres, get a hustle on, this Fruiter's got to sail";
Then it's push and pull, and tug and strain, and "Get the loaders clear,
And clear the lines and warp her out; she's getting out of here."

We've hardly time to say farewell, or draw a weary sigh;
We've hardly time to snatch a bite or close a weary eye;
For another Fruiter's on the line, just watch her come about,
"Stand by you monthly men, stand by, and get her cargo out."

We don't know how quotations are—if wool is up or down,
If steel or cotton's up sky-high, or where the market's bound;
Or what of "bulls", or what of "bears", or what the tickers say—
But FRUIT is mighty active on Castilla dock today.

It's bananas and bananas, and bananas all day long—
Our sunrise chant at break of day, at night our evening song.
We plot and plan, and scheme and dream, and sweat from sun to sun
To grow a dozen stems of fruit where once there grew but one.

And it's click, click, click, with bananas sliding past,
And every single stem of fruit exactly like the last;
Row after row, and tier on tier, the cargo grows and grows,
And what they do with all the fruit, the good Lord only knows.

Almirante's Album

Page XI

Changui, Nola and Dr. Otto Tieman Brosius ready for the links

—Cartoon by Wilmet

DR. OTTO TIEMAN BROSIUS, though he appears in our Album in the togs generally worn at the Changuinola Country Club, would, if he were President and on the Board of Directors, decline to admit as a member any one not clad in English "shorts" and a "pith" helmet.

Dr. Brosius was born in Belleville, Illinois, in 1800-and-something. He attended the primary and high schools of Belleville and graduated from St. Louis University in 1907. He made the trip around the world with the Fleet from 1907 to 1909 and upon his return entered Tufts Medical College, from which he graduated in 1913.

From 1913 to 1917 Dr. Brosius was Resident Physician at Ancon and Santo Tomas Hospitals, Panama. From there he went to Colombia, where he practiced medicine for several years. For further study Dr. Brosius went to Europe, graduating from the London School of Tropical Medicine in 1922 with the degree of D. T. M. & H. He returned to Colombia, where he again practiced medicine until he joined the UNITED FRUIT COMPANY on May 31, 1925, as Superintendent of Medical Department, Panama Division.

"Doc" works hard and plays likewise. He participates in most activities and can generally be relied upon to give a good account of himself in anything he undertakes.

His pet hobby is languages, several of which he speaks fluently (including the Scandinavian). When not otherwise occupied he reads omnivorously or writes poetry and prose.

He is always ready to listen sympathetically to our troubles and to give his whole-hearted help or advice, regardless of the occasion.

The Children's Carnival

WHAT proved to be a very interesting and successful event in our community was the *Carnaval Infantil* or Children's Carnival of 1928, held in Almirante during the three days preceding Ash Wednesday—February 19, 20, 21.

The idea of having a carnival for the kiddies originated among a group of Almirante ladies, and a committee was appointed for the purpose of making arrangements, Mrs. Thomas Owens being named President.

The usual round of entertainment which makes up the program of a regular carnival was followed through on a slightly modified scale. On Saturday, February 18, all the Almirante children congregated for the purpose of electing a queen to preside over the festivities, and a king to act as her consort. Amidst great enthusiasm and singing of carnival songs the ballots were opened, resulting

A group of merry-makers at Almirante's Children's Carnival

in the election of Betsy Gutierrez as Queen and Charles Lowing as King. The Queen named Barbara Brosius and Eileen Owens as her Maids of Honor.

On Sunday, the 19th, a Costume Dance was held in the Pastime Club, which, in addition to all the children in Almirante, was attended by a large number of grown-ups. Refreshments were served by the committee of ladies in charge, and the kiddies were given a wonderful afternoon's entertainment. The dance was followed by a parade in which the Queen and her Maids of Honor in beautifully decorated carriages participated.

On Monday it was planned to have races and outdoor games, but owing to unfavorable weather this part of the program had to be canceled.

Tuesday, the final day of the festivities, was celebrated in real carnival style. A Tamborito Dance was held in the Pastime Club, followed by indoor games and serpentine and confetti battles. The dance was attended by the Queen and her Maids of Honor, dressed in their robes of state. Mrs. Lowing and Mrs. Hall acted as joint hostesses for the children and received hearty cooperation from all the ladies of Almirante. The event was one long to be remembered by all.

A Conservative (?) Account of Guabito's Masked Ball

THE hospitable Guabito Athletic Association kindly invited the entire Division to attend a most picturesque masquerade which was held in the Clubhouse on the evening of February 17. All the Districts responded to the invitation with keen enthusiasm, vying with one another to produce the handsomest and the most grotesque costumes.

The Almirante crowd gathered in the *Telire,* and Mr. and Mrs. Adams invited a number of the tourists from the *Saramacca,* which was in port at that time, to join us.

Arriving at the scene of the festivities our very souls were touched by the lyric strains of Lydian measures wafted softly on the evening breeze by the harmonizing Guabito Orchestra, all beautifully uniformed for the occasion in scarlet velvet with gold embroidery. The elegant furniture had been newly upholstered. Everything was exquisite. The light from the new glass chandeliers was soft and without glare, yet was reflected resplendently from the tall mirrors on either side of the hall. The capable ushers moved about silently. The harmony of the music was reflected on all sides. There was absolutely nothing to ruffle the spirit.

The dance was ushered in by a sweet, soft, slow and melodious waltz. Other dances, round and square, followed in well-ordered sequence, and all masks were removed after the Grand March, after which delicious refreshments were served.

Among those who attended or should have attended were the following:

Dr. Barbour and Mr. Komp, the distin-

Overseer Harold W. Sampson arrayed as "Himself" and Mrs. A. F. Beckman, half bathing beauty, half padre, at Guabito's picturesque masquerade on February 17

—Sketches by Georges Wilmet

guished guests of the Division, were urged to attend, but firmly and with apparent regret declined, intimating that certain refreshments might not prove sufficient for such a thirsty host. (The accuracy with which truly scientific men prophesy coming events is most uncanny).

Mrs. Rock, in the garb of a Dutch girl, looked for all the world like a Van Dyck portrait. Her little son Francis acted as page, distributing floral favors during the Grand March. "Daddy" Rock, our Railway Superintendent, should have been likewise engaged—it would have been so becoming to his figure.

Mr. Jack Barnett wore, as usual, one of the best costumes of the evening.

Mr. Ulric Blancett, the plutocratic banana grower, dressed as a negro peddler woman, vending her wares of candy and cakes, furnished one of the cleverest make-ups of the evening.

Mrs. Wray personified "Rule Britannia" most successfully.

For Mr. Keating and Miss Hazen to disguise themselves as the King and Queen of Hearts was not masquerading in the true sense of the word.

The Grahams (now we're so sorry—it's the association, we suppose), well, anyway, Mr. Graham played most excellently the part of a fiery sultan or emir and Tillie Ransford was beautifully arrayed in the flowing garments of a sultana or harem queen. Here we must not leave out Jimmy Morris, who in his rôle of Toonerville Trolley conductor hastened this desert couple's trip to the waiting chariot.

George Rice was well disguised, but someone tickled him and he laughed.

Garbed in the graceful garments of an Arab sheik, Mr. A. C. Sawyer, our worthy Paymaster, entered the festive hall, and when a sudden mysterious silence momentarily pervaded the atmosphere, he broke out into melody, singing The Bedouin Love Song with such expression that several of the ladies fainted and the singer had to be hushed and abducted from the scene.

Mr. L. H. Crossman, our famous bridge builder, aspiring to be an electric plant detective, disguised himself as a watt and caused a short circuit.

Mr. Beckman seemed happy in a bigger sense than being merely "Happy Hooligan" and his good wife seemed to be pleasantly basking in the atmosphere of her husband's sunny disposition.

Mr. Wilmet graced the occasion immaculately attired in morning clothes and without a mask, and his attention seemed attracted by but one beautifully masqueraded feminine figure. He would neither have cared nor have dared to be interested otherwise.

You have read such books of Revolutionary

days as "Hearts Courageous" or "Richard Carvel". From those same pages may have wandered forth the Bookouts (meaning out from the book) to be the hero and heroine of such a dashingly thrilling romance. Mrs. Bookout, in classical Colonial vesture, "minuetted", bowed and courtsied, elegantly and smoothly as a swallow skims the river's brink at eventide and gracefully as glides the gondola upon the crystalline bosom of the park lagoon. Her worthy spouse might then and there have challenged in her defense and have drawn his foil for deadly combat, so realistic was the attire of this charming couple.

Three queens were long the mystery of the evening. They entered together, seemingly unattended, and haughtily surveyed the ribald throng as each might have gazed upon her subjects in the dim, dark ages past. Mrs. O. T. Brosius represented Cleopatra in all the ravishing splendor of that romantic queen, even to the ibis and the serpent. Mrs. A. C. Sawyer so much resembled the biblical Sheba that one felt the atmosphere charged with the wisdom of a Solomon. In her representation of the glorious Fatima, Miss Mae Kenney, our Hospital Matron, made us recall Turkey in her days of mystic, oriental grandeur.

THEN suddenly imagination was wafted away to sylvan wilds of a primitive America, when Mrs. William Arnold entered garbed as a robust Pocahontas seeking a Captain Smith to save, but finding her unmartial husband vestured in the discouraging and commonplace cap and apron of a foreign chef.

Then the Arabian Nights loomed up with unprecedented vividness when young Alan Notman stepped forth in the artistic array of a Turkish prince—or probably an emir—possibly an Abdullah Bul-bul Emir, seeking his vengeance on some Ivan Skavinsky Skavar who had not had the courage to make his appearance.

Two dangerous pirates from the frigates of Morgan were represented by young Mr. Parcells and Mr. K. A. Davidson, who attacked as vociferously as any pirates ever attacked before. In all the dark days of Tripoli or the Spanish Main no pirates ever sailed across the bar so frequently nor attacked so many schooners as did they. Their bloody thirstiness even made Mrs. Davidson tremble until her beautiful cape shook and shivered like a coconut palm when the barometer drops.

Mrs. Blancett was—well—red all over, even her shoes, stockings and knees.

Mrs. MacGowan's garb was so simple—just that of a naughty little girl. It was a clever make-up and took you back to your good old schooldays—golden rule, hickory stick, three R's and all. Mr. MacGowan's dress was as raven black as the beard he used to wear.

Messrs. Brown and Olson so cleverly represented shy and blushing debutantes that it was whispered as an absolute fact that each had two proposals before it was ascertained that they were stalwart males.

DR. O. T. BROSIUS, dressed as an Arab sheik, was the only member of the Medical Staff present. He carried with him a golf club and ball. No one knew who he was until he gingerly placed the ball on the thick Turkish rug, addressed it in his inimitable, lingering manner, swung furiously at it—and, as usual, missed it by a mile.

Dr. Peon preferred to dutifully play his rôle of Romeo in Almirante, and Dr. Carrol, who had almost started out with the party as one of Mack Sennett's bathing girls, became chilly and remained at home.

Miss Snooky Wertz donned what was for her a really perfect disguise—that of an old-fashioned girl.

Mrs. Deems would be attractive in anything she might choose to wear, and she was in keeping with this remark on this occasion. Her husband, our Superintendent of Construction, dressed as a Tropical Sanitary Inspector, closely resembled, barring one outstanding feature, the man described in the ditty, "There's a Red Light on the Track for Boozer Brown".

Everyone expected to see Benny Miskell disguised as a bridge player. It would have been his only opportunity to masquerade as such.

Mr. Dudley and Miss Ruby Cover were both very attractively dressed and created much animated comment.

Dressed as a matador, our dapper Mr. Connolly, Chief of Wireless, entered the ball to the soft strains of the Toreador air from "Carmen". All he required to make his portrayal perfect was the bull.

It is impossible to remember and describe all the participants in this pleasurable gathering, but everyone contributed most gracefully toward making the dance an event of beauty and wholesome entertainment long to be remembered in the social annals of the Panama Division.

Almirante Personals

On February 6 the S. S. *Suriname* brought back Mrs. O. T. Brosius, Otto, Jr., and Babsy (the family of our Medical Superintendent), and Miss Mae Kenney, Chief Nurse, from vacation in the cold north.

We were very glad indeed to see Vice President M. C. O'Hearn, Mr. W. L. Long, General Manager Purchasing Department, and Mr. M. J. Thomas, Superintendent of Merchandise Department, Costa Rica Division, who visited Panama during February, remaining four days.

Miss Ada Clower, sister of our Superintendent of Farms, sailed for New Orleans en route to her home at Durant, Mississippi. Miss Clower is very fond of the tropics and we hope pleasant memories of our Division will hasten her return.

Sports—Entertainment

The Winter Golf Tournament of the Changuinola Country Club is now under way. The Division Champion "To Be", who will receive a set of golf clubs for his skill, will be announced later.

The Board of Governors of the Almirante Club (Messrs. Murphy, Tibbetts and Dr. Carroll) have some very attractive entertainments outlined for the season.

The Air Service of the Tela Railroad Company

The "Tela", like a huge bird poised for flight, ready to take off on one of its flights over the jungles of Honduras

IN the December issue of UNIFRUITCO there appeared pictures of the Company plane, the "Tela." The pictures depicted the plane in its initial and test flight to New Orleans, prior to shipment to its tropical home here at Tela. The plane is the famous Fokker monoplane type, with Wright Whirlwind motor, and is almost an exact replica of the "Spirit of St. Louis."

Since its arrival the "Tela" has been in continuous service in Honduras, between the port of Tela and the capital, Tegucigalpa. It has also made a number of flights to Puerto Castilla, and to San Pedro, one of the larger inland towns of Honduras. Piloted by our Mr. Sumner B. Morgan, the "Tela" escorted the "Spirit of St. Louis" from the flying field at Tegucigalpa when Colonel Lindbergh left

Mr. and Mrs. Foster, the first cruise passengers to take the flight to Tegucigalpa. Mr. Foster is standing at the extreme right of the picture. Mr. R. H. Goodell, General Manager of Honduras Divisions (in white) is in the center

Honduras on another leg of his Central American good-will tour.

The Tela Railroad Company maintains fully equipped flying fields for the plane at Tegucigalpa and Tela, and has also constructed a landing field at San Pedro. Puerto Castilla is favored with a natural landing field that is almost perfect. The Company has done much to stimulate confidence and enthusiasm in air transportation not only by purchasing one of the best planes available, but by the construction of competent landing fields and by securing the services of an experienced pilot. The Company radio and telegraph stations at our air ports facilitate efficient operation in giving time of arrivals and departures, and also encourage a feeling of security by maintaining a check on the location of the plane as it roars its way over the jungles.

It necessitates five days of tedious travel overland to reach the Honduran capital, Tegucigalpa. With inauguration of passenger and mail air service, the Company has reduced the time taken for this trip to less than two hours. This efficiency, and the increasing recognition of the safety of traveling by plane, have made their appeal to Hondurans and it is rapidly becoming the fashion for citizens to avail themselves of this service between the interior and the towns of the Atlantic seacoast. Salesmen going to the interior or coming to the seaports were quick to acclaim a service that means a saving of nearly a week's time.

The picturesque flight over tropical jungles, lakes, mountains, and veritable seas of bananas that grow in the river valleys, is already beginning to attract tourists who are making a tour of the Caribbean on the Great White Fleet ships, and it is expected that an increasing number will include the Honduras flight in their retinue of entertainment when making the tropical cruise.

Whether it is high in the air, glistening like a sheet of silver in the rays of the tropical sun, or resting lightly on its landing gear in the hangar near green jungles, the trim, speedy, silver "Tela" typifies the ultimate in modern transportation. It is in a country where communication is almost entirely lacking that one is forcibly impressed with the importance, the boon of aviation. In the air, passengers travel in safety and in comfort at a speed of ninety miles per hour. They look down and see travelers bound for the same destination but limited to almost primitive means of travel because of lack of highways. The "Tela" is an example of the Company policy to keep up with modern progress. In Honduras, as the only means of rapid communication between the coast and the interior, the Company's air service is a distinct aid to the Government, and can well take its place with the long list of services that promote the good will of the Tela Railroad Company.

Jones: "I'm very sorry, old man, that my hen got loose and scratched up your garden."

Smith: "That's all right. As a matter of fact, my dog ate your hen."

Jones: "Fine! I've just run over your dog with my car."

Banes

Snaps from Banes Division

Antonio Gonzalez Garcia

District Superintendent, Tasajeras

Sr. Antonio Gonzalez Garcia was first employed by the Company in 1908 as telephone operator. Since then his record has been as follows:

1910-1912 Asst. in Charge of Agriculture, Equipment Storehouse
1912-1913 Livestock Inspector
1913-1914 In Charge of Agriculture, Equipment Storehouse
1914-1915 Chief of Office, Deleite
1915-1917 Inspector, Colonos
1917-1922 Overseer, Cañada Honda
1922-1924 Overseer, Lindero
1924-.... District Superintendent, Tasajeras

ON Thursday, February 23, we had the pleasure of welcoming to the Division, President Victor M. Cutter, Mr. Daniel G. Wing, a member of the Executive Committee and a Director of the UNITED FRUIT COMPANY, also Mrs. Wing, Miss Wing and Miss Brace. Mr. W. W. Schuyler, General Manager of the Cuban Divisions, came over to Banes with the party. Their stay was very brief, as they left us to visit Preston Division the next day, February 24.

Thursday evening, in the American Club, we heard our President give us an insight into the Company's plans for the coming business cycle. The proposed projects of the Company, as outlined by Mr. Cutter, together with a presentation of actual facts about the Company, not to mention his humorous stories, held the interest of us all.

We were then accorded the pleasure of hearing Mr. Wing. His advice concerning Company investments, while brief, gave us much food for thought.

Mr. Schuyler explained the difficulties regarding crop restriction.

Mr. Harty finished by pointing out the plan of economies which would have to be put in force.

Following the meeting a dance was held. In all, we had a very enjoyable evening.

Macabi

MACABI suffered a great loss during the month in the departure of Mr. and Mrs. W. A. Bailey. "Bill" has been transferred to the Boston Engineering Department and although we wish him the best of luck in his new venture, Macabi and the Division in general feel that the Baileys will be hard to replace as they contributed greatly to the social life of the Division and their home was many times the scene of *fiestas* and *bailecitas* for us all. The Baileys were tendered a dinner on the eve of their departure by a few of their most intimate friends and those who did not attend in person were certainly there in spirit to wish them the best of luck.

Another Loss: At this writing we have been informed of the transfer of Mr. W. S. Lampton of the Manufacturing Department to the Campo. "Bunk", as he is more affectionately known, has often expressed a desire for life on a farm (such inclinations no doubt being handed down to him by his agricultural ancestors), and his past experience in field work on Felder's Loop, a rural estate near his home

(*Turn to page* 570)

Boston

March, 1928

Tropical Department

MR. JOHN HOGAN of the Preston Division has been spending some time at the General Office this month. It is fortunate he is staying quite a while, for he gives more time to his job than to his new acquaintances in the Tropical Department, and we are just beginning to know who the quiet soul in the Conference Room is.

Joe Laffie, one of the *Jefes* in charge of putting on the annual show of the UNIFRUITCO Club, is having his own troubles trying to find a leading man, soothing the girls who are not to be leading lady, writing advance press notices, appointing assistants, and altogether being a jack-of-all-trades in connection with the production of the play.

Mr. Pollan is still up at the General Office—by *force majeure*. He has tried several times to get started back to the tropics for a few more months of comfort, only to find at the last minute that we can't do without him. Never mind; while there's life there's hope, and some day he'll get that round of golf.

The Production Department is growing to such an extent that we now have Dorothy Hayward part time to assist in filing—and she surely does assist.

While the Tropical Department had its nose to the grindstone, "Sunshine" Blake had her nose in the snow. It seems that she is one of these queer beings who prefer snow to palms and accordingly she spent her vacation skiing in the Laurentian Mountains. She returned from climbing mountains, sliding down slopes three-quarters of a mile long, and tobogganing sixty miles an hour down the Montreal chute—still intact, but with a mighty sunburn. They say that when the movies were being taken of the gang in "characteristic poses," she did a spread eagle with one ski north, one ski south, one pole buried in the snow, one raised to heaven and the rest of her somewhere in between. And she calls that "having a whale of a time!"

Engineering Department

Willis Dresser has again decided to venture to the tropics. This time the lure was coffee instead of sugar. We may expect to have the count of the number of cherries per tree on the coffee plantings before Bill returns from Costa Rica.

William Bailey has been transferred from service in the Banes Division to the Engineering Department at Boston. We extend a hearty welcome to Mr. Bailey and trust that he will find just as much satisfaction in his associations here as he did in the Banes Division during the past six years.

Accounting Department

The lure of the tropics proved to be too much for Miss Caroline Kirk and she has returned to the land of sunshine and palms. Miss Freda Tarbox has been appointed "reporter" for the Accounting Department to fill the vacancy caused by Miss Kirk's departure. We expect big things from you, Freda.

General

One needs a guide now to find the various employees since the Company expanded to the extent of taking on another wing on the eleventh floor of the First National Bank Building. A "Who's Who" might be helpful.

Research Department

MR. S. CHENEY has recently joined the staff of the Chemical Research Laboratory. Mr. Cheney graduated from the Massachusetts Institute of Technology in 1926, and before coming to us was chemist in the main laboratory of the American Woolen Company at Shawsheen.

Additional reels of motion pictures taken last December by Mr. Dellenbaugh during his sojourn in the tropics were recently shown in the Research Laboratories. These pictures were in every manner as interesting as the two reels on "Banana Handling" first shown, and constitute an animated diary of Mr. Dellenbaugh's journey, from the time he entered the South Station at Boston until he embarked again for the States.

Mr. R. Whymper, a recognized authority on cocoa and author of "Cocoa and Chocolate, Their Chemistry and Manufacture," was a recent visitor at the Research Laboratories. Mr. Whymper comes from Surrey, England, and is spending a week or so in Boston.

We recently had the pleasure of a visit from Dr. W. A. Orton, Director and General Manager of Tropical Plant Research at Washington and Central Baraqua, Cuba.

So far as the Chemical Laboratory is concerned the Sales Department of Tropic Foods, Inc. is becoming little less than a public nuisance. Every morning the general trend of shouting welling up the elevator shaft runs about as follows:

Skeptical Customer: Too mooch, I tell you.

Joe Pitelli (rapid-fire salesman): Lissen now, I bin savin' this fruit for yuh. Lookut it! Perfect! An' at four cents——!

S. C.: No. Two cent. Four cent too mooch.

J. P.: Why, you (not chemically pure), d'yuh want me ter GIVE it to yuh?

Bill Carter (dignified, though a Dartmouth man): Now, Mr. Pagoda, there are seven million Boy Scouts in America and——.

S. C.: Two cent.

J. P.: Lissen, now. No. Lissen! I'm tellin' yuh! Lissen! It's good fruit an'——.

S. C.: Two cent. No more.

B. C.: There are six million Boy Scouts in America and——.

J. P.: Lissen, you! I kin go out any place an' get five cents for this fruit. Now, I'm tellin' yuh! Say, kin yuh——.

S. C.: No good. Two cent!

B. C.: Now, about these bird houses—there are four million Boy Scouts in America and——.

J. P.: Didn't I tell yuh yesterday? Lissen, now. No, Lissen. Do I look like a sucker? Lissen, if you can get any fruit like this for four cents anywhere else I'll give this to yuh. Lissen. Yes, I know, an'——.

B. C.: About these bird houses, Mr. Pagoda. There are three million Boy Scouts in America. Now then, if——.

S. C.: T'ree cent, mubby t'ree—no more.

J. P.: Hey! We ain't running a hand-out here. Lissen, now. All right. Yes. Lissen! See what I mean? Why, say, you can't get half as good fruit. No, lissen——If I was to tell yuh——.

And so on.

Revere Sugar Refinery

JOHN MADDEN is now a proud father, his wife having presented him with a son and heir on March 14.

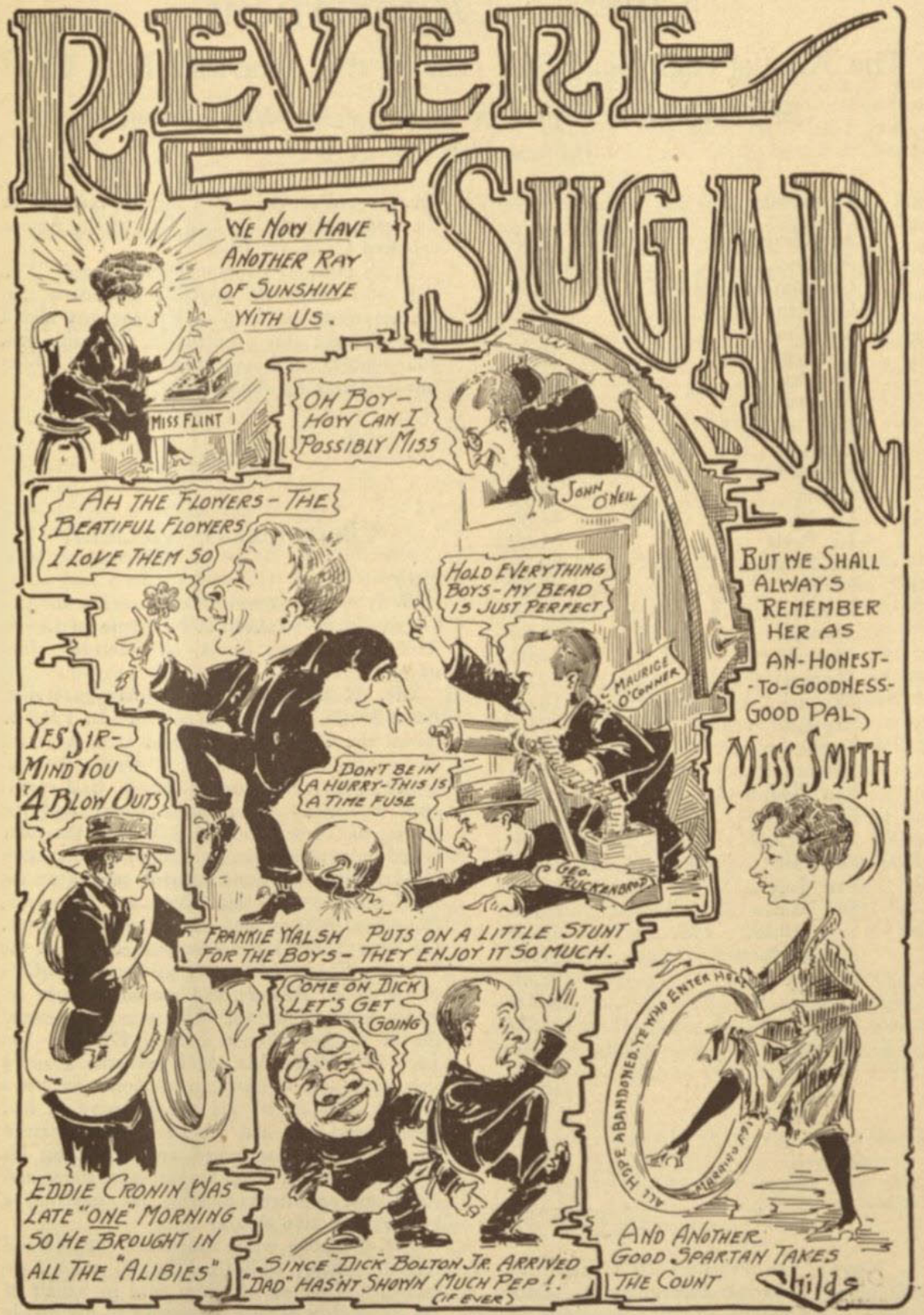
Mr. John W. Lowe, Jr., Superintendent, has gone on a visit to Cuba, and we know that his many friends in the Sugar Divisions will be glad to see him.

Felix O'Hagan, an employee of the Revere Sugar Refinery for almost forty-five years, died on March 9. Mr. O'Hagan came to the Refinery on July 15, 1883, and during his long service was employed in the various operating departments. We extend to Mr. O'Hagan's relatives and friends our sincere sympathy.

Eddie Cronin of the Engineers Office is in the hospital convalescing from an operation. We hope he will soon be back with us entirely recovered.

First College Graduate: Ah, look at the handsome college girl. I can always tell a college girl when I see her.

Farmer's Son: Sure you can, but you can't tell her very much.


REVERE SUGAR
WE NOW HAVE ANOTHER RAY OF SUNSHINE WITH US.
MISS FLINT
OH BOY- HOW CAN I POSSIBLY MISS
JOHN O'NEIL
AH THE FLOWERS - THE BEATIFUL FLOWERS I LOVE THEM SO
HOLD EVERYTHING BOYS - MY BEAD IS JUST PERFECT
MAURICE O'CONNER
BUT WE SHALL ALWAYS REMEMBER HER AS AN-HONEST--TO-GOODNESS-GOOD PAL
MISS SMITH
YES SIR- MIND YOU 4 BLOW OUTS
DON'T BE IN A HURRY - THIS IS A TIME FUSE
GEO. RUCKENBAUS
FRANKIE WALSH PUTS ON A LITTLE STUNT FOR THE BOYS - THEY ENJOY IT SO MUCH.
COME ON DICK LET'S GET GOING
ALL HOPE ABANDONED, YE WHO ENTER HERE
EDDIE CRONIN WAS LATE "ONE" MORNING SO HE BROUGHT IN ALL THE "ALIBIES"
SINCE "DICK" BOLTON JR. ARRIVED "DAD" HASN'T SHOWN MUCH PEP !! (IF EVER)
AND ANOTHER GOOD SPARTAN TAKES THE COUNT
Childs

Marine Department

The Annual High Seas Roll Call of the American Red Cross

Showing How Ships of the "Great White Fleet" Responded for 1928

Steamships	*Amounts Collected*
Abangarez	$ 87.00
Atenas	103.00
Calamares (Laid Up)	42.00
Camden	44.00
Carrillo	66.50
Cartago	49.00
Castilla	55.00
Coppename	78.00
Ellis (Laid Up)	8.00
Esparta	....
Heredia	87.00
Iriona	70.00
La Marea	44.00
La Perla	51.00
La Playa	52.00
Levisa	27.00
Limon	45.00
Macabi	19.50
Manaqui	27.00
Maravi	....
Mayari	34.00
Metapan	19.00
Parismina	17.00
Pastores	105.00
San Benito	22.00
San Blas	32.00
San Bruno	22.00
San Gil	12.00
San Jose	13.00
San Mateo	27.00
San Pablo	49.00
Santa Marta	111.00
Saramacca	57.00
Sixaola	338.00
Suriname	101.00
Tela	49.00
Tivives	20.00
Toloa	147.00
Turrialba	117.00
Ulua	31.90
Zacapa	73.50
Total	$2,352.40

NOTE: On February 28 Captain A. G. Dunning, Marine Superintendent, issued a notice to Captains of all Steamships of the UNITED FRUIT COMPANY, relative to the amounts collected on each ship in response to the Annual High Seas Roll Call of the American Red Cross for 1928.

In his circular Captain Dunning said, "You will note from the attached statement that the response has been most generous and I wish to take this opportunity to thank you, your officers, and your crew, for your efforts towards making this drive a success."

Glenwood B. McLean

WE regret to announce the death of Mr. Glenwood B. McLean at his home in Lower Middleton, Nova Scotia, on Monday, January 16, 1928.

Mr. McLean was born in Margaretville, Nova Scotia, February 21, 1898. In 1918 he joined the Canadian Navy and after a period of training on H. M. C. S. *Niobe* was assigned to active duty on H. M. C. S. *Laurentian,* patrolling the Atlantic Coast and the shores of Newfoundland. When the war ended he entered the service of The Canadian Government Merchant Marine sailing at various times on the ships *Canadian Voyageur, Canadian Fisher,* and *Canadian Volunteer.* On May 2, 1923 he entered the service of the UNITED FRUIT COMPANY as Second Officer of the S. S. *Macabi,* and served in that capacity until April 16, 1926, when he joined the S. S. *San Blas* as Second Officer. On June 24, 1926, Mr. McLean was granted sick leave and returned to his home in Nova Scotia. His health did not improve as had been hoped for and we have just received word that he has passed away, leaving his wife, two small sons, Irving, age four, and Paul, age eighteen months, his parents, a brother and two sisters.

Mr. McLean was a courteous, capable and reliable officer, well liked by all who have known and sailed with him, and in behalf of the Steamship Service we extend to his people our deepest and most sincere sympathy.

The Sea Voyage

The author of this quaint narrative is a fourteen year old "incorrigible", who was placed on the S. S. "San Blas" on a recent voyage by the British Consul in an effort to find some occupation in which the lad might take an interest and try to mend his ways. This is his impression of his trip:

THE *San Blas* was to sail for Havana Saturday at twelve but it snowed so hard that it was put off till Sunday morning at eight o'clock. The boat was just leaving harbour when it started to roll. Then I began to feel sea-sick as I washed the dishes. The Chief Steward came along and asked why I wasn't working? I told him. But I was told this wasn't a pleasure trip. The more I worked the worse I felt. Ted Bono, one of the stewards, came back aft and helped me a great deal. I stayed in bed the next four days. The British Counsel was on board and he visited me quite often and told me to get out in the air.

The fifth day if the P. O. messboy didnt discourage me by saying I had to scrub the ally. After I had worked for a while I felt better. A few days later we anchor in Havana harbour. The next day we docked at Havana wharf which was called Santa Clara. Wednesday morning we left Havana for Puerto Castilla. I went ashore and I made friends with two young boys. One had a 22 rifle. He asked me all about America. I told him a good lot which he would never know unless he went there. Wednesday night at eight o'clock we left for Tela to get a load of bananas for Boston. The ship left Tela Monday morning for Boston. The first two days I felt sea-sick but I worked as well as I could. Friday the sea was rough but I got used of rolling from one side to the other.

The Chief Officer sews canvas a lot. It looks easy job to me. Anyway he is always sitting down but he is old and I suppose he cannot run around like the young officers. The chief engineer is a little man I guess he is alright but he doesnt look very tough. There are other men that talk to the first engineer. I know they are not firemen because they eat opposite the pantry. I like the third officer because probably he is red-headed like myself. The counsel is I guess having a good time. He plays with my boss nocking boards along the deck. The captain is nice looking fellow. You would never take him for a seaman. He looks like a real gentleman. The radio men always looks as though they were sleepy.

I dont think I will make another trip. The chief steward I dont think likes me. The man in the pantry is an old crank but he treats me very nice. The 3 cooks are as black as coal. The men I work for are all very nice gentlemen. They act better than the officers. I bet if I had my sister with me they would all treat me nice so they would make a hit with her.

Heroic Rescue by Seaman at Honduras

WILLIAM KENNA, able seaman on the UNITED FRUIT COMPANY'S steamer, *San Blas,* which docked at Long Wharf yesterday from Tela, Honduras, is hailed as a hero by his mates on the ship, as a result of a daring rescue he made at the Honduran port. Kenna, whose home is at 469—68th Street, Brooklyn, N. Y., plunged overboard to aid a sailor from the Norwegian steamer *Imperator,* loading fruit at an adjacent pier. The man was seen to tumble into the water and then set up lusty shouts for help. Notwithstanding the fact that sharks abound in these waters, Kenna did not hesitate a moment but immediately dove in, got to the struggling seaman and managed to hold his head above water until others of the *San Blas* crew came to his aid, pulling both from the water.

Captain George H. Grant, Commander of the *San Blas,* intends to call Kenna's bravery to the attention of the British Consul-General, to obtain official recognition of the heroic act.

—*Boston Post,* March 13, 1928

English Tourist—What was the name of that last selection played by the orchestra?

American Waiter—Go feather your nest.

English Tourist—Go jump in a lake! I asked you a civil question.

When a mule runs away he stops and looks back as soon as he thinks he is out of danger. A horse runs until something smashes.

San Francisco

One Thousand and One Tales from One Thousand and One Fourth Street

WE have at last heard from Mr. Michael Cousins, Chief Clerk in the Accounting Department and one of the first to arrive on the scene of battle in San Francisco from New Orleans. Mr. Cousins, while arduously engaged in some figures, was heard to say on interruption, "Go west, young man." His sanctimonious proclivities prevented him from using more forceful language but we must condone his outbreak because the Accounting Department has been running up the electric light bill in the office on night work, and balmy spring weather is in the air.

While on the subject of spring and its buoyant effects, we cannot overlook our buoyant secretary, Miss Lorraine Boyd. If she were less buoyant she would not be Miss Boyd, and if she were more buoyant she might, in the words of our Noo Yawk friend, Mr. Charles Rais, become a "Boid." Miss Boyd, who has the distinction of having been one of our very few women cashiers, entered the Seattle Branch in that capacity. She is now secretary to our Division Manager, Mr. Rider.

Mr. Ralph C. Hill, Acting Wharf Superintendent, can be seen each Monday night over the Cargo Sheet in the wee hours of the morning, rehearsing the act of "Diogenes and His Lantern." Mr. Hill was employed by the Fruit Dispatch Company in January, 1927, as Dealers Service Representative for the San Francisco Branch and was transferred to his the Fruit Dispatch Company in January, 1927, Division.

Captain Tom Smith has added to our store of knowledge. He asked a young lady what the "suspense" file was for and she replied quickly, "For my love letters." We divulge no names!

The Accounting Department would be derelict in its duty if it failed to announce to the other sixty or seventy thousand members of the UNITED FRUIT COMPANY recent arrivals in the new San Francisco Division.

Foremost on the list is Mr. Henry I. Wheeler, formerly Chief Clerk of the Long Wharf Accounting Office. He has taken over the important position of Division Accountant and, with his enthusiasm and optimism, is a welcome member of our family.

Another arrival, and by no means an unimportant one, is Mr. Harry Sanders Cann, Jr., from the Long Wharf office, who is now in charge of the Freight Accounting. Mr. Cann wants the world to know that he has arrived in California and that although he may have left many broken hearts in his old community he still is a single man. With his good looks and amiable disposition, he feels that it may be a little difficult in this section to live up to the old motto that "absence makes the heart grow fonder."

The latest arrival is Mr. David Vincent Geary, from the New York Division, who stopped off to see us on his way to Los Angeles to assume command of Accounting matters in that office. Mr. Geary will be Cashier of the Los Angeles Branch. Now that Los Angeles is importing its own bananas we fear that he will not be able to get to the golf links as often as he would like to. We regret to learn that he left his clubs in New York but we know that after inhaling the invigorating air of Hollywood he will wire Mr. Mills to ship them by aeroplane.

We apologize for having failed to make announcement in March UNIFRUITCO, that Mr. Arsene Paul Prudot arrived some few weeks ago from New Orleans. In addition to various other duties he has taken charge of the Fruit Dispatch and Pay Roll Bureaus and has made himself a most useful member of the Accounting Staff. It is evident from the silver-gray letters that arrive daily from New Orleans that the "only girl in the world" is still true to him.

Baltimore

THE honeymoon has dipped beyond the horizon. When the S. S. *Oriskany* gracefully steamed into port here on March 11, it marked the completion of Voyage Four (commercially speaking), but only Voyage One for Captain T. L. Proud and his bride. The log concluded thus: "Mrs. Proud is a good sailor."

Mr. H. A. Merchant, Division Cashier, and Mrs. Merchant, recently departed upon an extensive tour of Maryland, Virginia and North Carolina. This trek to Wilson, North Carolina, inaugurates the 1928 vacation season which promises to surpass those of previous years as the Cable Clerk reports that to date he has not received any inquiries concerning the "Urgent" telegraphic address of the office.

Mr. and Mrs. Wm. H. Foster motored from Philadelphia to view the Conowingo Dam and touring onward arrived at Pier 1; this was indeed an agreeable surprise, the first visit in ten years. Mr. Foster was on the roster of the Philadelphia Division some twelve years back.

After eight years' service among the aristocrat of fruits (Count Bunch), Mr. C. I. Elliott, Acting Cashier, felt that he knew all points about the banana. However, he was at a loss when his young daughter quizzed him thus, "Why is it that one banana will not fight another?" and after waiting briefly for a reply, she finished, "Well, they're too yellow."

Banana Golf: Mr. A. Otter, Superintendent of Unloading, indulges in this all-year-around game every ship, and insists there is nothing more enjoyable, provided you keep in ship-shape, pay particular attention to the greens and stalk clear of the bunkers. Par is .02 per stem and shooting No. 1, 2, 3 and 4 holds below par is a frequent occurrence.

The new clerk, Mr. J. L. Glossner, glanced around the office several times and quietly remarked that he never before saw so many forms—tall, short, fat and thin.

Accounting Problem

Nine ripe bananas
Placed on the plate;
In came the hungry ones,
Then they were ate.

THINGS THAT BURN ME UP AND KNOCK ME COLD

By The Office Grouch

PEOPLE who are such poor shots that they cannot throw a piece of paper into a waste basket 12 inches wide at a range of 2 feet.

Fellows who come from other offices and smoke cigarettes when doing business with you, knowing perfectly well that *you* are not permitted to smoke.

Typists who place a Rush letter on your desk at two minutes to five and get out of the office before you have time to tell them that a whole paragraph has been omitted.

Office boys who don't clean or fill your ink-well till you ask them twice.

Confidential clerks who are so blamed confidential that they won't commit themselves by telling you the correct time for fear they are giving away secrets.

The new employee who is obviously slow to grasp his work yet stops you in the middle of your fifth explanation to him to tell you how much better were the systems they had in the last concern for which he worked.

The other fellow who is in the boss' office for all of 30 minutes while you make several attempts to get in to say something that would take about one minute.

People who leave discarded newspapers on the tops of lockers and throw paper towels in wash basins or on the floor.

Fellows who tell you how easy it is to get Cuba or the West Coast on their radios when you have tried two succeeding Saturday nights till 4 A. M. and got nothing but a severe headache.

Having the boss see you in the drug store during working hours and knowing that he will figure you are there for coffee, whereas you really went for aspirin. (This excuse is copyrighted and must not be used without permission of the inventor).

People who tell you emphatically on the 'phone that they will give a certain matter their attention and then forget.

Girls who are the reverse of overdressed and consequently don't want anyone else to get a little fresh air by having the window open.

Division Accountants who ask you questions regarding some phase of the work which you should be familiar with but are *not*.

New York

The Show

LET the cast-iron-hearted cynic who says "It can't be done!" withdraw into his shell and withhold further comment. It can be done. It will be done. It is being done.

This emphatic outburst is delivered by us apropos of the big show that is to be staged in May, for we have just attended a rehearsal in the waiting room at Pier 9. To say that we were pleased with what we saw is to put it mildly.

Mr. McGuire, the director, a short, quiet man, with a touch of gray at his temples, but a youthful appearance withal, lost no time in useless preliminaries.

"Come on, girls," he said in a tone that was low but that brooked no delay, "line up and follow me."

With that he began without music to execute a step that appeared quite simple—we nearly fractured our spine trying it later in private—and the girls soon took it up. Mr. McGuire walked up and down the line.

"All right! Hold it!"

The girls stood still.

"You stay in line," said the director, pointing to one dancer, "and you, and you, and you. The others may sit down."

This elimination disposed of, work began in earnest.

"Now girls," the director continued, "watch me and fall in when you catch the step. Let's have the music."

George Reynolds of the Passenger Department struck up a swinging fox-trot at the piano, and the director danced—gracefully, with no affectation or superflous movements, and with precision that came of a thorough knowledge and long experience.

One by one the girls fell in, cautiously at first, then with more assurance, and before long the entire line of feminine aspirants was swinging along with movements that were graceful and precise. The Chester Hale Girls themselves would have been envious.

When the dance was finished, the entire cast burst into applause, both for the director and for the dancers.

Unfortunately, we were compelled to leave just as the male members were lined up for their ordeal, and we were denied the pleasure of gloating over those self-conscious members of our sex who were so gallantly struggling to acquire grace and skill in the presence of their feminine competitors.

We saw enough of the rehearsal, however, to convince us that the show will be an unqualified success. And the rumors that have reached our ears concerning other features of the show have whetted our appetite to such a degree that we not only can scarcely wait for the performance ourself, but we are talking about it enthusiastically to everyone we meet.

(Let's all do this and there'll be "standing room only" on the big night).

Bridge Party a Huge Success

THE second endeavor of the 1928 regime of the UNIFRUITCO Club took the form of a bridge party at the Louvre Restaurant, this city, and was a social as well as a financial success. The Chairman of the Entertainment Committee worked hard to make the party enjoyable and the consensus of opinion seems to indicate that another bridge evening ought to be sponsored shortly.

The prizes were leather-covered bridge sets, of which there were 24. Approximately one hundred and thirty were present, this number consisting of members and their friends, and everyone was agreeably surprised to find that the New York Division could turn out so many experts.

New York Division Notes

Readers of UNIFRUITCO will be interested to know that New York ships of the Great White Fleet have recently carried several very distinguished passengers. Aboard the S. S. *Ulua,* which arrived February 26, were the Honorable Charles Evans Hughes and Mrs. Hughes, and Dr. Leo S. Rowe, who were returning from the Sixth Pan-American Conference in Havana.

The S. S. *Toloa,* which sailed on February 11, had aboard as cruise passengers Major and Mrs. Anthony Drexel Biddle of Philadelphia, and Colonel George L. Watson, Engineer of the famous Holland Tunnel, and his wife.

The *Carrillo,* which arrived in New York February 28, had as a passenger from Barrios, Guatemala, Mrs. Theodore Roosevelt, widow of the late President.

The Duke of Atholl arrived on the S. S. *Zacapa,* March 29. He plans to sail for England aboard the S. S. *Cameronia,* April 7.

The *Zacapa,* arriving March 8, brought our own President Cutter and Mr. Daniel G. Wing, President of the First National Bank of Boston, and a Director of the UNITED FRUIT COMPANY. Mr. Wing was accompanied by his wife and daughter and a niece, Miss A. Brace.

Mr. M. C. O'Hearn, Vice President in Charge of Northern Domestic Divisions, returned by way of New Orleans recently from an extended visit to our Tropical Divisions.

Mr. Hartley Rowe, Vice President, and Mrs. Rowe arrived in New York aboard the S. S. *Metapan* on March 15 and proceeded to Boston.

Mr. A. W. Mills, Accountant of the New York Division, arrived in New York aboard the S. S. *Pastores,* February 26 after a trip that included Philadelphia and New Orleans in this country and Preston, Banes, and Havana, Cuba.

The S. S. *Calamares* was dispatched on Friday, March 17, for Boston, where she took aboard the members of the Boston Chamber of Commerce for the Limon Cruise.

It has been noted recently by a careful observer that Charlie Dieckmann of the Passenger Department has manifested a curious interest in such necessities as ice-boxes, yea, even Frigidaires, and other articles of household furniture.

Transfers: H. Field, Accounting Department, New York, to General Office, Boston.

Alexander A. E. Carter, from Kingston, Jamaica Division, to purser, New York Division.

F. J. Christie, second radio operator, S. S. *Toloa,* to clerk, Accounting Department.

D. A. Frese from Accounting Department, New York, to Accounting Department, Preston Division.

John G. Keane from Accounting Department, New York, to Accounting Department, Banes Division.

D. V. Geary from Accounting Department, New York, to Cashier, Fruit Dispatch Company, Los Angeles.

William Pedersen from House Publications Department, New York, to Manager's Department, Fruit Dispatch Company, Pier 15.

New Employees: George Dames, ledger clerk, Accounting Department.

Joseph E. Kane, pier clerk.

James Gormley, office boy, Accounting Department.

William Schraeder, watchman.

John J. McNeary, declaration clerk, Freight Terminal Department.

John G. Keane, clerk, Accounting Department.

John L. Robb, pier clerk.

John W. Remington, pier clerk.

Cornelius J. Coleman, pier clerk.

Ray G. Stannard, pier clerk.

Accounting Department

MISS MILDRED KIRCHMER has been elected to fill the unexpired portion of Mr. Geary's term as Governor of the UNIFRUITCO Club of New York. Miss Kirchmer is not unknown to the members of the club, having long been an ardent supporter of its activities.

Just who will have the leads in the forthcoming Cabaret-Minstrel of the New York Division is a profound secret. It was whispered in the reporter's ear, however, that Vera Harrison, daughter of Mr. C. W. E. Harrison, of the Accounting Department, will be on the bill.

Upon being phoned a few minutes before noon on March 6, that he was the father of a husky boy, Mr. William Monroe Paterson, Intransit Clerk of the Freight Accounting Bureau saw himself (as so many proud daddies have likewise dreamed) the possible father of a future President of the United States of America.

After sympathizing with fellow employees who are the fathers of mere daughters, this sire of the future leader of the nation passed around a brand of cigars (Who Burns) to his friends in the office.

But how are the mighty fallen! The next morning after a visit to the hospital another Scotchman's heart was broken for all the cigars were smoked and the boy was only a girl after all.

Unifruitco Personalities

NEW YORK DIVISION

No. 2

"Fine Day Jim"

WHEN Mrs. Theodore Roosevelt, widow of the late President, walked down the gangplank of the S. S. *Carrillo* at Pier 15, East River, a few weeks ago, it was an amazed group of spectators that saw "Fine Day Jim" stride over to the estimable lady, stick out a big Irish hand, and have that hand warmly grasped by both of hers.

"Fine Day Jim" is the gateman at Pier 15, East River, our New York banana pier. We resolved forthwith to see Jim and secure his story of the occurrence.

The day that we selected for carrying out our resolution proved one of the worst of the winter. A foggy, sopping-wet, oppressive sky hung about the towers of lower Manhattan, while torrential rain, mixed with sleet and whipped around corners by a vicious gale, rendered the act of crossing broad South Street something of an accomplishment. More than once we were forced to clutch frantically at our hat to save it from being launched unceremoniously into the wide inland lake that stretched across the intersection of Fulton and South streets. We approached the north gate of Pier 15.

"Fine day!" boomed a big voice within.

We glanced at the leaden sky. We saw the rain-drops that pelted the pavement with such force that they rebounded fully three inches. We shivered and shook the water off our drenched coat.

"Yes, fine day!" we faintly murmured. "A very fine day!" Then, with vigor, "for murder!"

Jim's eyes twinkled. He ambled toward us in his "office", the drive-way that leads past the delivery office down on to the pier.

"Give us a chew." He knew we could not comply.

"Say, Jim," we began, "what's this we hear about your knowing Mrs. Roosevelt?"

"Shur-re, I've known the Roosevelts all me life," Jim said, as he straightened up. Red face and white moustache assumed an expression that was both serious and proud.

"Me mother was the finest cook in all N'Yawk. It's many a meal she's got up for the Roosevelts and the Cheneys and the Morgans and a lot of other folks that was 'way up in N'Yawk. Yes sir, she served up a wonderful feed."

"But, Jim," we urged, "we want to know more about this meeting with Mrs. Roosevelt."

"Well, you see, when I hear Mrs. Roosevelt's comin' in, I tells the boss I'd like to be down the pier when the ship docks. He looks at me sorta funny, but he lets the other guy relieve me for a while.

"Out on the end of the pier there stands the Roosevelt boys, Archibald and Theodore. Lord! I knew 'em when they was little kids, but I ain't seen 'em in years.

"Well, I walks up to one of 'em, and I says, 'Good mornin', Master Roosevelt!' (You see, I always called 'em 'Master').

"'Why, I don't just place you,' he says.

"'Well, I'm Mrs. Lundy's boy, Jim,' I says; 'you recollect Mrs. Lundy?'

"'I certainly do, Jim! What a long time

Mrs. Theodore Roosevelt arriving at New York on the S.S. "Carrillo" of the Great White Fleet. She was met at the pier by her son, Theodore Roosevelt, who is seen guiding her down the ship's ladder
—International Newsreel Photo

since I saw you!' he says, and then we chat a while.

"Soon the ship comes up alongside the pier, and the Roosevelt boys, they dash up the gangway and meets their mother. When they come ashore, Theodore says, 'Just one minute, mother, here's someone you may remember.'

"With that he beckons to me, and I goes over.

" 'This is Mrs. Lundy's boy, Jim,' he says.

" 'Why, Jim Lundy!' says Mrs. Roosevelt, all smiles, 'what a big man you've grown to be! I'm so glad to see you!' "

Here Jim swelled up until he filled completely the commodious cloak he wore. It must have taken an extra yard or two of that blue-gray material to make this particular watchman's uniform.

"And that's all there is to it," Jim concluded. Then, "Hey there, you blankety-blank-blank!" he yelled as a mischievous driver tried to tease him by driving past without handing over his gate-pass. "How d'ya get that way?"

The driver laughingly swung out from the cab of the truck and chucked the crumpled pass into Jim's big hand.

"Now get t'h—— out of here!" Jim roared, a twinkle in his eye. Turning again to me, "Shur-re," he reiterated, "me mother was the best cook in N'Yawk. It's many a meal she got up for the Roosevelts and the Cheneys and the Morgans."

"Fine day!" he boomed presently. Outside the pelting rain-drops still rebounded from the pavement fully three inches.

Freight Traffic Department

The Quick and Punctual Character of the United Fruit Company's Service

(From *Diario de Centro America* of Guatemala City, February 20, 1928)

PERSONS who by reason of their business have to make frequent shipments should naturally prefer those companies that insure them the most rapid and punctual service. Of all those touching at our ports the UNITED FRUIT COMPANY is the one that offers the best conditions in this respect. Just a few facts on the subject are sufficient to prove it.

As is known, the Steamship lines of the UNITED FRUIT COMPANY were organized to meet a need of the Company itself. Being engaged in the cultivation of the banana, it was obliged to have at its disposal safe and rapid means for the transportation of the fruit; otherwise it would have been exposed to considerable losses which in such an event might even have affected its interests. For the foregoing reason the ships of the UNITED FRUIT COMPANY are in a very different position from that of the vessels belonging to other steamship companies, since the Fruit Company is more concerned than anybody in having its ships reach their destinations punctually.

Numerous years' experience shows that the UNITED FRUIT COMPANY has obtained its purpose. It has in its favor a record for punctuality in the arrivals and the departures of its ships. Schedules are followed with an exactness only customary in big railway companies, thanks to the fact that no effort is too great to prevent delays.

Moreover, the efficiency of the Fruit Company is all the greater in view of the fact that due always to its business it has a series of connections with the principal markets of the world, so that even when its own ships are customarily used in traffic between Caribbean ports and the United States, the Company is in a position to deliver any kind of cargo entrusted to it at any European port, under the same quick, punctual and careful conditions. In fact, the steamship concerns associated with the UNITED FRUIT COMPANY and to which the latter furnishes good profits through freight charges on its own products, have an evident desire to be on good terms with the Fruit Company and to furnish it the most satisfactory service.

The UNITED FRUIT COMPANY does not therefore try to make record trips for publicity purposes, but actually each trip of its ships and of those connected therewith does constitute a record, as this is desirable for the prompt dispatch of the banana which it is necessary to deliver as quickly as possible at the ports of destination. Notwithstanding the fact that the minimum time employed by direct steamers between Barrios and Europe is twenty-six days and that taken by cargo entrusted to the Fruit Company in order to make the same run is generally twenty-one days, the UNITED FRUIT COMPANY has never made any boasts of its greater speed. * * * The UNITED FRUIT COMPANY could show with indisputable proofs that it has transported cargo between Barrios and European ports in 20 and even in 18 days.

The advantage of the UNITED FRUIT COMPANY holds good even when, due to possible unforeseen contingencies, the cargo has to wait in New York a week for transshipment. Even in such cases the haul is made in 23 and 25 days, a shorter time than that employed by the direct steamers. The reason is very simple: The latter not only travel a greater distance and call at a greater number of ports, but they waste more time waiting for cargo. The business of utilizing each trip in order to carry the greatest amount of merchandise makes this necessary, whereas the business of the Fruit Company as we have said compels it to gain in speed.

In addition to facts previously set forth, exporters should keep in mind the very important one that it maintains a weekly service that is regular and invariable throughout the year. It frequently happens that shippers of coffee or other articles have need to make shipments out of season and then they encounter difficulties. With the Fruit Company they do not have any and so they can accept without hesitation any agreement for delivery on a fixed date in the certainty that the UNITED FRUIT COMPANY will see to it that they comply with their agreements.

"Ah," said the magistrate to the old offender, "here again, eh? Well, let me tell you before you start in with one of your stories that I wouldn't believe you if you swore on a dozen bibles. Whatever you say I'd believe the opposite was the truth."

"Your honor," said the old offender, "I am guilty."

Edna T. MacDonald

IT was with a deep sense of loss that the employees of the UNITED FRUIT COMPANY learned of the sudden death from pneumonia on March 24 of Miss Edna T. Macdonald.

Miss Macdonald first became affiliated with the Purchasing Department of the UNITED FRUIT COMPANY as secretary-stenographer in July 1919.

She was a member of the Woodcliff Community Church of Woodcliff, N. J., and Past Matron of the Order of the Eastern Star, Chapter 181.

Miss Macdonald will always be remembered as an efficient worker, a faithful employee and a loyal friend. To her family and friends the officials and employees extend their heartfelt sympathy and condolence in their bereavement and irreparable loss.

Banes Division News Item

(*Continued from page* 558)

in Magnolia, Mississippi, will stand him in good stead.

He has been with us in Macabi since December, 1926, and has endeared himself to all, his social status being looked upon as one that will be hard to equal by those he has left behind to bear the burden. However, perhaps it is best, as he will be able to distribute his time evenly around the Division, which will, of course, benefit the organization; and we are not selfish. All of which prompts the following little verse:

The losses in Final Molasses
Mean a lot to this Company.
But the greatest loss of the present crop,
Is "Sherwood" has left Macabi.

Passenger Traffic Department

MR. BLANCHARD first entered the business field as a clerk in the office of the Auditor of Passenger Accounts, New York Central Railroad, in July, 1918. After two years' service in various capacities, he was engaged by the UNITED FRUIT COMPANY as a stenographer in the Passenger Department. Advancements followed from time to time until he attained his present position, that of Assistant Chief Clerk, Passenger Department.

A. C. Blanchard

Broken Trips

By A. C. Blanchard

New York

NOT so long ago "Mr. Average Traveler" quite contentedly followed the line of least resistance and adapted himself and his affairs to the trade routes and specific itineraries established by transportation companies, but this condition is fast giving way to the demand for "something different." It is true there are many calls for standard cruises, tours, etc.; a most natural reaction, indeed, when one considers the extensive advertising campaigns under way practically the year around. Inexperienced travelers, too, are prone to accept "made to order" trips such as those featured in advertising, and it is quite reasonable to assume that a goodly portion of the travel induced through our advertising campaigns falls within this category. Inexperience and the line of least resistance—they go hand in hand—but an ever-increasing number of passengers are now demanding broken trips to suit their individual needs. It is quite significant that during the calendar year 1927 we were called upon to prepare three hundred and thirty-six special fares for broken accommodations and special cruises. Truly an amazing number, but there is added significance in the fact that it represents a considerable increase over 1926; and so back over a number of years.

And what is the cause of this trend toward broken trips? It cannot well be traced to any one source, but it is rather attributable to a series of circumstances. First and foremost is the fact that the volume of travel, both by land and sea, has increased tremendously of late years, and reinforced by information and experience the traveling public is naturally more critical in its selection of itineraries, particularly for pleasure. Take for example, the passenger who has only a limited period of time at his disposal yet who insists upon calls at certain ports en route. A trip of this kind will often involve two or more steamers, for which a special fare is required. The element of competition is also undoubtedly a contributing factor. The avenues of travel are so many and varied that the public is offered an exceedingly wide group to select from. This, of course, invites keen competition and unusual efforts on the part of all concerned to control the business available.

Not a little of the business of this Department can be charged, directly or otherwise, to our slogan, "Every Passenger a Guest." The feeling of complete satisfaction, born of courteous treatment and pleasant memories, may well be the nucleus of a real desire to repeat the experience. Such is our constant aim in the handling of our patrons. Our advances in this direction have met with a large meas-

ure of success, but it follows that such "repeat" travelers will seek new fields of interest. In order to attain results it is often found desirable to use the ships of two or more of our services during a trip.

A considerable volume of this sort of traffic is delivered to us by agents of rail lines. Rail and water transportation companies, realizing the value of through rail-water circle tour business, have closely cooperated toward the end of developing pleasure business from otherwise nearly inaccessible interior points of the United States. Special reduced fares are in effect, some in the summer, others in the winter, and still others the year around, with round trips to Havana as the destination. These tours are so arranged that passengers have a choice of several rail routes to the port of embarkation and to the port of debarkation on return. The fares are also quoted so as to apply via various gateways—for instance out through New Orleans and return via New York; or out via Key West and return via New Orleans; and a number of other combinations. These trips are proving very popular and it has been our experience that passengers often decide to avail themselves of our services beyond Havana, with the result that various combination trips to the Canal Zone, Colombia or Costa Rica are subsequently purchased in connection with the through rail tickets originally held.

Although, from our standpoint, these unusual itineraries are somewhat more difficult to arrange than standard tours published in regulation tariffs, every effort is made to offer trips pleasing to the traveling public. Accordingly, it behooves us all to foster, rather than to discourage, special fare business of this character.

THE Gulf Park College of Gulfport, Miss., one of the outstanding girl's colleges in the south, is sponsoring its second annual Caribbean Cruise, sailing on the S. S. *Heredia* March 24. A special itinerary has been offered, including calls at Havana, Port Antonio, Kingston, Cristobal and Puerto Castilla. The cruise is under the personal direction of Dr. Richard G. Cox, President of the College. So successful was the cruise last year, that there have been more registrations for this year's cruise than the ship can accommodate, practically one hundred being booked, most of whom are students of the College.

The *Item Tribune,* one of the leading newspapers of New Orleans, recently announced its fourth annual Caribbean Cruise. The party will leave New Orleans on the *Heredia* July 7. All indications point to a larger party this year than ever before, this no doubt being due to the fact that the previous trips have been so successful.

The S. S. "Calamares" of the Great White Fleet proudly occupies the "center of the stage," with the sky-line of Manhattan as a background. This striking photograph was taken from the office of the Sperry Gyroscope Company, Manhattan Bridge Plaza, Brooklyn, N. Y., as the "Calamares" was steaming up the East River to her dock at Pier 15

A Greeting to Le Gros Michel

By J. F. Rex
Elders & Fyffes (France)

Dear Great Michael:

You have many kindred species, but from amongst them all, it is you alone who has progressed far along popularity's way with the people of most European countries, and so we tender to you this eulogy.

Not so many decades ago the tropical lands were your entire world, until that restless being, the white man, found you and through pioneer achievement and much difficulty eventually saw you established in the front line of world food commodities.

In those early days your golden yellow apparel must have fascinated trading man when he came your way. Your luscious flavor gratified tasteful man and he took you on the high seas for strange destinations. Ignorant man knew not then the special comfort and scientific care you needed to live through any harsh change of environment; thus you so often perished on the journey.

Curious man seemed instinctively to understand you were an All Food Fruit—perhaps he even wanted to be kind to you in that long ago time. Experience alone was to teach intelligent man the standard of travel-luxury you must enjoy on sea and land to reach, in perfect condition, the countries beyond. You never dreamed how that master-mind, man, would be victor over the elements, and market you with success, all the year round, so many, many days' steaming from your homeland.

Today, in 1928, how changed and seemingly easy is your state of being—clever man has won through. Your treatment is unequalled by any rival fruit. You are born and grow up under ideal conditions; leave your tropical birthplace ensured of a first-class sea voyage and splendid travel on land. Before you fulfil commercial man's aims, you are cared for, like a child, in fine chambers and there let develop your mellow ripeness. Thinking man is considering your welfare still! Plodding man has not finished. Oh, no!

We do not flatter you when we say you have made talented man do wonderful things. Swamps and jungle forest have been transformed into plantations and townlets, "dead" tropical land made into prosperous estates. You have made that organizer and builder, man, create a great fleet, invent many varied types of machinery, construct special rail stock, erect huge stores, plan heating and cooling processes, etc. Economic man has given you a rank in modern industry. The government man says a lot about you in Customs regulations.

Lucky man did aright to befriend you. You now prove a good sailor, you never mind rail travel and the various countries you arrive in.

You must share more praise still! Scientific man tested your claims to nutritious substance and a vitamin value—admitted truths these days. The medical man has you on his books. You have that ability to give pleasure at the table of the rich or poor. Really you are everywhere—from a necessary diet in the sick room to a popular ingredient of refreshments in jazzland.

Dear Great Michael, you have assuredly a big future. You are announced in a greater variety of foreign press issues and appear in more advertising campaigns than any other fruit. Go on! Energetic man is behind you.

Much more could we write, but we terminate in wishing you a very prosperous year in these parts of the Eastern Hemisphere.

Ever interested in you
St. Ouen Branch

Mother: "Well, Johnnie, and how did you like the Zoo?"

Johnnie: "Splendid, mother, but I didn't see all the animals. When we came to that place where it said 'White Horse' and 'Red Seal,' father went in by himself."

—*Budget*

A Scotch salesman sent his sweetheart a penny packet of flower seeds as a New Year's gift, with these directions: "Plant these th' noo, Maggie, ma bonnie lassie, and ye'll have a braw bouquet for ye'r birthday giftie."

A Page of Resident Managers
FRUIT DISPATCH COMPANY

J. C. Carpenter

SINCE 1904 Jim Carpenter has loyally and efficiently represented the Company in the Buffalo territory. His work and his methods have been held up to younger men in the organization as a model to shoot at. Many of us have taken such a shot; most, if not all of us, have fallen short of the standard that Jim has set and maintained year after year. He is not only well known to the entire organization of the Fruit Dispatch Company but has also been to the Tropics and has many friends in Central America who will be glad to renew their acquaintance with him through his picture.

A. G. Hughes

HERE is his thumbnail history in his own words:

"I came with the Company 25 years ago as a messenger and was on a pie and coffee diet for about six years. Served a couple of years as Resident Messenger at various points and was promoted to Resident Manager at Winnipeg in February, 1911. Transferred to Fort Wayne, Indiana in October, 1912."

Al Hughes has been Resident Manager at Fort Wayne for sixteen years. He is as substantial and dependable as his picture and record indicate. It is interesting to note that the following employees of the Fruit Dispatch Company started with Hughes in Fort Wayne.

A. D. Burkhart—Resident Manager, Los Angeles, Cal.

K. H. Redmond—Resident Manager, Cleveland, Ohio.

M. A. Heingartner—Asst. Resident Manager, Detroit, Mich.

C. M. Holtzman—Asst. Resident Manager, Pittsburgh, Pa.

M. C. Huddle—Cashier, Columbus, Ohio.

J. M. Havens—Cashier, Pittsburgh, Pa.

Our genial friend seems to be something of a combination Teacher-Banana-Man. He has made a pronounced success in both lines of endeavor.

E. S. Fisher

RESIDENT Manager at Indianapolis, Indiana, since 1914. We are glad to announce to the world that Mr. Fisher has enjoyed the unprecedented experience of celebrating on one day (the 12th of March) his sixtieth anniversary and becoming the proud possessor of a granddaughter. He advises us that "both are doing well."

Mr. Fisher is President of the Indianapolis Garden Flowers Society and has played a leading part in promoting interest in home-beautifying in Indiana.

P. H. Deering

NO introduction is required. Deering is well known in his Department and has just recently come back from a great trip through Tropical America, during which journey he made many friends and acquired "Cristobal," his famous Honey Bear. He (Deering, not the bear) came with the Company in 1909 as Resident Manager in Elmira, N. Y. Since then he has spent twenty years as Resident Manager in various Branches. He has been in Columbus, Ohio, since 1914.

Mr. Deering could not be divorced from his desk long enough to have a picture taken at a photographer's studio.

LONG SERVICE ORDER OF THE FRUIT DISPATCH COMPANY

Salaried Employees Whose Service Dates from 1900

Group III

Name	*Location*	*Present Position*	*Date*
J. Mattise	New Orleans	Salesman	March, 1900
G. D. May	New Orleans	Clerk	May, 1900
G. M. Stephens	New York	Asst. Supt. Unloading	June, 1900
H. C. McKenzie	Buffalo	Traveling Auditor	October, 1900
J. Maggi	New York	Selector	December, 1900

Salaried Employees Whose Service Dates from 1901

Group IV

Name	*Location*	*Present Position*	*Date*
J. J. Troy	New York	Dock Ticket Clerk	May, 1901
L. W. Dietrich	New York	Traveling Representative	June, 1901
Chas. Weinberger	New Orleans	Vice President	June, 1901
G. W. McLean	New Orleans	Wharf Superintendent	August, 1901
A. Duffard	New Orleans	Messenger	December, 1901

Fruit Dispatch News Items

The Fruit Dispatch Company is now handling a weekly shipment of Canal Zone bananas into Los Angeles, Calif. This operation comes under the direction of Mr. J. Scott Rider, Manager Sales Department, Western Division, San Francisco.

Mr. E. S. Whitman has been appointed Editor of FRUIT DISPATCH Magazine and will also report Fruit Dispatch Company activities to UNIFRUITCO. Will all Fruit Dispatch employees therefore please remember to forward to Mr. Whitman news of Company activity in their respective Departments, subject to proper approval by Department Heads? It is important that full cooperation be given to this in order that the Fruit Dispatch Company may have proper representation in UNIFRUITCO.

Two young men from the Dealers Service Department have been chosen for Branch House work. Mr. J. H. Madison has been made Assistant Resident Manager at Syracuse, New York, and Mr. R. T. Bodine is now Assistant Resident Manager at Cleveland, Ohio. These men have demonstrated their ability in the Dealers Service Department and those who are familiar with their qualities predict that they will carry on in the same way in the new work assigned them.

Mr. John P. Morgan, formerly of the Costa Rica Division, has entered the Dealers Service Department, where his many friends wish him the best of success.

Mr. J. L. English, formerly Crew Manager of the Dealers Service Department, has been given supervision of the entire field operations of the Department and will report to Mr. F. W. Kastner, Advertising Manager. Mr. English has devoted two years to the different field operations of the Service and is well qualified in every way to handle

the work of Supervisor. He has our congratulations and very best wishes.

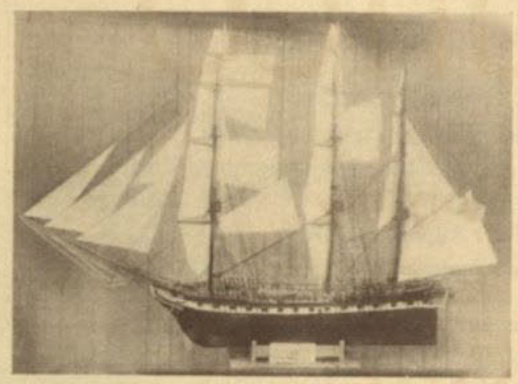
Mr. K. H. Redmond has been promoted from Acting Resident Manager to Resident Manager at Cleveland, Ohio.

Mr. W. H. Grove has been appointed Resident Manager of the San Antonio, Texas, Branch.

Mr. W. O. Smith, formerly Traveling Messenger, New Orleans, La., has been appointed Assistant Resident Messenger at Memphis, Tenn.

Mr. S. G. Genovese, formerly messenger at Mounds, Ill., has been appointed Assistant Resident Messenger at Pullman, Ill.

Our sincere sympathy is extended to Mr. C. A. Kuehl, Fruit Dispatch Resident Messenger at Birmingham, Ala., on the death of his wife, Edna M. Kuehl, on February 15. Mrs. Kuehl, whose death was caused by pneumonia, was thirty-six years of age, and had been married to Mr. Kuehl for more than sixteen years. Three children survive—two sons, thirteen and fifteen years of age, respectively, and a daughter, three and a half years old.



"Old Ironsides," modeled by an old mariner

OUR sympathy is extended Mr. Fred M. Muller, Division Superintendent, Tropical Radio Telegraph Company, New York, on the sudden death of his father, John C. Muller, Sr., at his home in Los Angeles, Cal., at the age of seventy-one years.

Mr. Muller came from a family of navigators in Holland and was himself a mariner and a consulting engineer. His particular hobby of late years was the modeling of old vessels and just a short time ago he presented the accompanying model of the U. S. Frigate *Constitution* ("Old Ironsides") to the City of Los Angeles as a means of aiding in the country-wide raising of funds for the restoration of that historical old ship now lying in the Navy Yard at Boston, Mass. The reproduction is eight feet, seven inches long, and six feet high.

Mr. Muller worked for nine months in the construction of the model, under the handicap of failing health. Our Division Superintendent, when sending us the photograph last week, before he knew of his father's last illness, expressed himself as hoping that his labor of love might appeal to those who have not yet contributed to the fund for the preservation of "Old Ironsides."

No Office Hours for Leaders

WITHOUT work no amount of talent, no amount of influence, will carry a man very far in this world. I am amazed at the point of view of some modern young men. They look at the successful men of the day as if they supposed success to be an easy matter—giving rich gifts and requiring little in return. I wonder what they would think if they could see the average day's program of one of the men they envy. Theodore Roosevelt left a correspondence that of itself involved more work than the average man does in his active life. Yet it represented only a small part of his activities.

The higher men climb, the longer their working day. And any young man with a streak of idleness in him might better make up his mind at the beginning that mediocrity is to be his lot. Without immense, sustained effort he will not climb high. And even though fortune or chance were to lift him high he would not stay there.

For to keep at the top is harder almost than to get there. There are no office hours for leaders. —*Cardinal Gibbons.*

UNIFRUITCO

Published Monthly
by
UNITED
FRUIT
COMPANY

FOR EMPLOYEES IN ALL
BRANCHES OF ITS SERVICE

M.E.SCHOEN
EDITOR

May
1928

Volume III
No. 10

UNITED FRUIT COMPANY
BOSTON, MASSACHUSETTS